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Family Background and Access to Post-Secondary Education: What Happened over the 1990s?

by Ross Finnie, Christine Laporte and Eric Lascelles

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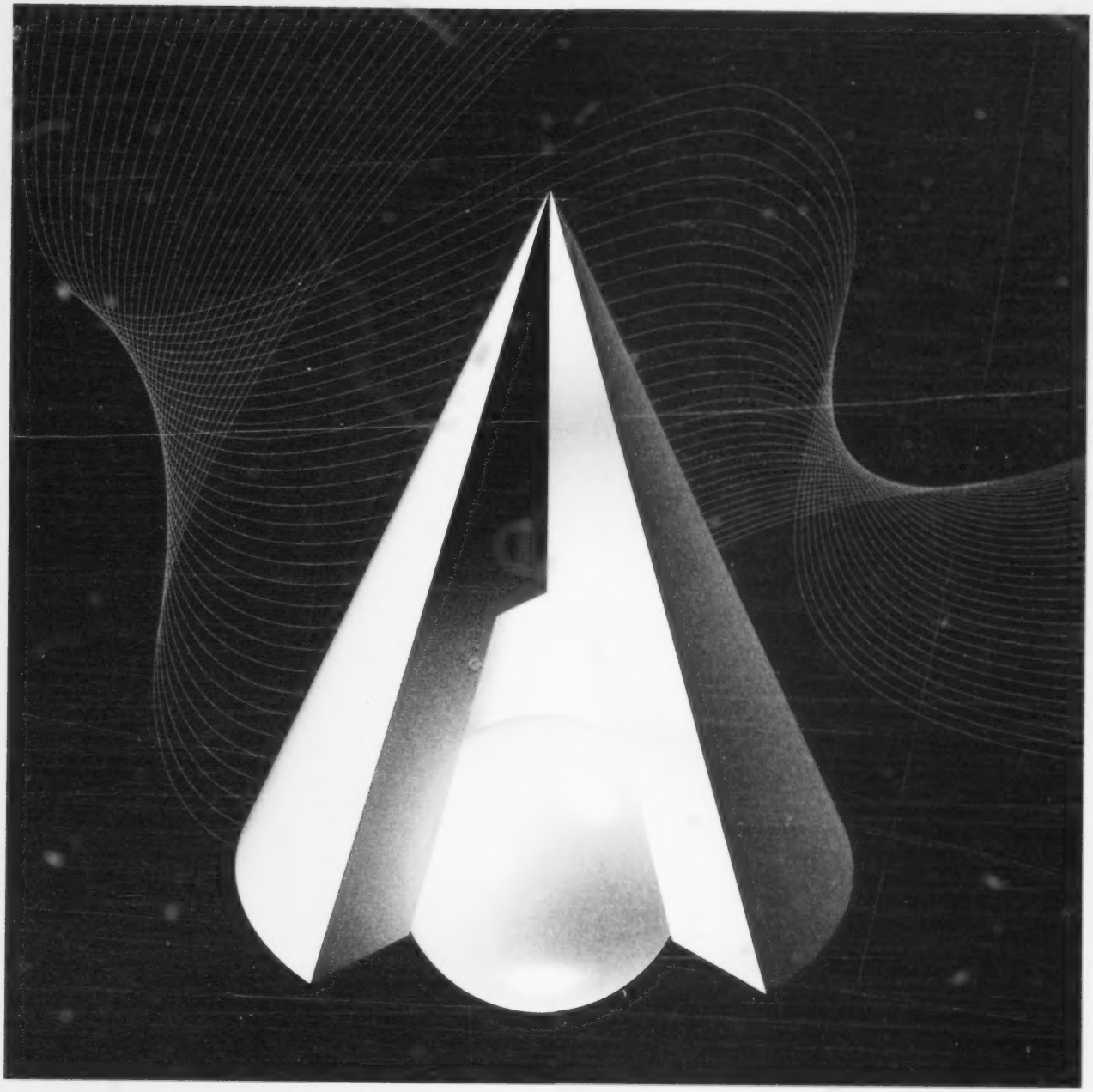

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Abstract

This paper presents new evidence on the relationships between access to post-secondary education and family background. More specifically, we use the School Leavers Survey (SLS) and the Youth in Transition Survey (YITS) to analyse participation rates first in 1991, and then almost a decade later in 2000. Overall, post-secondary education participation rates rose over this period. However, participation is strongly related to parents' education, and whereas participation increased for individuals with more highly educated parents (especially those who went to university), they increased rather less, or in some cases (especially for males) declined for those from lower parental education families. The already strong "effect" of parents' education on post-secondary access became even greater over the 1990s. Participation rates are also strongly related to family type, but whereas those from two parent families continue to have an advantage over single mother families, the gap generally shrunk over the 1990s, especially where the mother had university level schooling. We also find a number of interesting trends by province.

Keywords: access to post-secondary education, higher education

I. Introduction

How does access to the post-secondary education system vary with family background? At what rate do those with lower-education (and generally lower income) parents go on to college or university as compared to those from higher education/income backgrounds? In what manner does family type—two parent versus single parent—enter these equations? To what degree does post-secondary participation vary by province? How have rates of post-secondary participation generally, and the patterns of participation by background characteristics, changed over time?

These and other related questions are of timeless relevance for two main reasons. First is the issue of equality of opportunity: going to college or university should be as attainable for individuals from lower socio-economic backgrounds as those with more privileged origins. Second, and related, the nation's economic performance is largely determined by its human resources, and key to this is that the most talented have the chance to go on to post-secondary education—regardless of family background.

These issues are, furthermore, especially pertinent after a decade that has seen tuition rates rise sharply, student financial aid programs change significantly, post-secondary institutions face severe financial constraints, family incomes fall and then climb again, the number of lone-parent families rise—all while a college or university diploma has become more important than ever to labour market success.[1]

The contribution of this paper is to present the findings of an empirical analysis of access to post-secondary education in 1991, and almost a decade later, in 2000. More specifically, we use the School Leavers Survey (SLS) and the Youth in Transition Survey (YITS) to present descriptive statistics and regression models of who gains access to higher education and how these relationships have changed over the last decade. Two definitions of access are employed: i) to any type of post-secondary education (i.e., from community colleges and vocational schools through university) and ii) to university specifically—that is, both a broader definition of access plus a narrower one representing what is usually considered the "higher" level of post-secondary education to which access is generally more limited. We focus on the roles of parental education and family type, while differences by province are also included in the analysis. Throughout, the analysis is broken down by gender.

We find that, overall, post-secondary education participation rates generally rose over this period. Participation is, however, strongly related to parents' education, and whereas participation rates climbed substantially for individuals with more highly educated parents, they increased rather less, or in some cases (especially for males) declined for those from lower parental education families. It thus appears that the already strong "effect" of parents' education on post-secondary participation became even greater through the 1990's.

Family type also has an important effect on participation rates, but here the trends go in a different direction: those from two parent families continue to have an advantage over single mother

1 See Finnie, Schwartz and Lascelles (2003) for a description of recent changes in post-secondary education as they pertain to access in general, and the student financial aid system in particular.

families, but the gap generally shrunk over the 1990's, especially over the case of university educated mothers. We also find a number of interesting trends by province.

II. The Literature

A significant literature exists on access to post-secondary education in Canada. In terms of review pieces, Looker (2001) provides a recent overview of existing work and presents policy recommendations, Looker and Lowe (2001) and Seddon (2001) also summarise the major conclusions and point out some of the gaps in the existing literature, while Junor and Usher (2002) paint a broader portrait of the current post-secondary education system which includes a significant discussion of access issues.

Turning to more specific studies, de Brouker and Lavallée (1998a) use the International Adult Literacy Survey (IALS) to examine whether parental education affects life outcomes, finding that higher "inherited intellectual capital" (i.e., parental education) leads to higher education levels in children. Finnie and Meng (2002) look at educational attainment as part of a multi-equation analysis of incomes using the Literacy Skills Used in Daily Use file to find that parents' education, parents' immigration, and province all affect men's educational outcomes. Knighton and Mirza (2002) use the Survey of Labour and Income Dynamics (SLID) to show that parents' education and family income are both strong determinants of post-secondary participation.

Christofides, Cirello, and Hoy (2001) use Survey of Consumer Finance data to focus on the effects of tuition fees and report that they do not seem to affect the pattern of post-secondary participation by social background. This is in contrast to claims by students reported in Foley (2001) that educational costs *are* a major deterrent in their pursuit of post-secondary education according to the SLS.

Relevant Statistics Canada's studies include Zhao and de Broucker (2001, 2002), which report, using the SLID, relatively small differences in participation by family income when all levels of post-secondary education are considered, but much wider gaps when just university is considered. Corak, Lipps, and Zhao (2003) suggest that individuals from higher income families are much more likely to attend university, but that the participation gap between high- and low-income families has been narrowing. Bouchard and Zhao (2000) compare changes in university participation rates over time using General Social Survey (GSS) data from 1986 and 1994. They find that rates increased for all levels of SES (socio-economic status), but climbed the most for those in the middle rank, less for those at the top, and least for those at the bottom—thus twisting comparative rates in an uneven pattern across family types, the changes further complicated by whether one focuses on absolute or relative gaps. Furthermore, these comparisons are tempered by smallish sample sizes and the data for the two periods not being perfectly comparable.

Frenette (2002), also using the SLID, investigates distance-to-school effects, and determines that post-secondary participation rates, especially for university, are strongly influenced by the distance an individual lives from a post-secondary institution, particularly for low-income students for whom the associated financial barriers would presumably be more pertinent. Andres and Krahn (1999) and Andres and Looker (2001) use longitudinal surveys of youth in British

Columbia, Alberta and Nova Scotia to find that rural youth obtain lower levels of education than urban youth.

Specifically using the School Leavers Survey (SLS) and 1995 Follow-Up, Finnie, Sweetman and Lascelles (2003) use a block recursive model which treats high school outcomes as intermediate variables through which background can affect post-secondary education, thus allowing background variables—including parental education, ethnicity, immigration status, and province of residence—to have both direct and indirect effects. With the same data, de Brouker & Lavallée (1998b) find that parents' occupation and their level of support for the education of their children influence educational attainment. Butlin (1999, 2002) also uses the SLS to look at a wide range of correlations between post-secondary education, family background, and high school outcomes.

Given the recent availability of the Youth in Transition Survey, to date only two studies have used it to look at access to post-secondary education. Raymond and Rivard (2003) examine the effect of tuition fees and other factors on the decision to participate in PSE to conclude that tuition fees have not been an important factor in determining access, while Tomkowicz and Bushnik (2003) study pathways to post-secondary education of 20 year-olds.

Much is thus known regarding post-secondary access and family background. However, our focus on how these relationships changed over the 1990's using two directly comparable data sources fills an important gap in the literature.

III. The Data

III.1 The School Leavers and Youth In Transition Surveys

This paper uses Statistics Canada's 1991 School Leavers Survey (SLS) and 2000 Youth in Transition Survey (YITS). Since both surveys target the same age groups at different periods in time, the YITS can be thought of—for the purposes of this paper—as essentially replicating the SLS nine years on.

The first wave of the SLS was conducted in April through June 1991 among youth aged 18 to 20 years old. Its main objectives were to determine high school dropout rates in Canada and to compare secondary school students who had successfully completed high school (graduates) with those who were still attending (continuers) and those who had left school before graduating (leavers). The SLS sampling frame was built using five years (1986 to 1990) of Family Allowance files, believed to provide the most complete listing of youth under 15 in Canada at that time.[2] A stratified sample scheme was then constructed from the variables available in these files: age, province of residence, and payment status (the variable that could potentially identify leavers). The resulting target sample consisted of 18,000 individuals aged 18 to 20 from the 10

2 For more information on the SLS methodology, see Gilbert and Devereaux (1993).

provinces. Of these, 9,460 were successfully interviewed in the first wave, and 6,284 in the second.[3]

The YITS was conducted from January to April of 2000 among a similarly aged 18-20 year-old group. It was designed to serve a wider set of analyses of major transitions in young's people lives, particularly those between education, training and work. For this YITS cohort (there is also a 15-16 cohort), the target population was residents of the ten provinces of Canada born in 1979 to 1981, with the sample design based on the Labour Force Survey (LFS).[4] Overall, 29,164 persons were contacted, and the final sample count was 22,378.[5]

Our analysis is restricted to individuals aged 19-20 not still in high school in order to minimise the problems associated with high school attendance.[6] The age restriction (i.e., those aged 18 are excluded) affects the analysis in two ways. First, a substantial number of individuals begin their post-secondary studies later than this, meaning that not all eventual post-secondary participants are identified in our data. However, checks with the SLS indicate that the general structure of going on to post-secondary education by family background does not change very much when older individuals are included in the analysis, so our results should be robust to this restriction. In any event, including 18 year-olds or further restricting the analysis to just 20 year-olds (the results for which are shown in the appendix) does not change the principal findings in any important way.

Second, some individuals, especially those aged 19 in Ontario, have not yet had the chance to finish high school, introducing the problems just discussed in the context of why 18 year-olds are excluded from the analysis. Conversely, Quebec's CEGEP system gives that province a high rate of overall ("any") post-secondary participation because it is open to younger individuals, but a lower rate of university participation because it delays university attendance until individuals are older than elsewhere. We adjust for these effects by including an appropriate set of province-age interactions.

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3 Although the SLS had a later follow-up survey, the present analysis is restricted to the information contained in the original survey in 1995, so as to have data that are directly comparable to the YITS in terms of respondents' ages. Finnie, Sweetman and Lascelles (2003) and Butlin (1999, 2002) use the follow-up survey for their analyses based on the SLS. A follow-up for the YITS is currently planned, after which it and the SLS Follow-up could be used to look at post-secondary participation over a more extended period

4 For more information on the YITS survey methodology, see Statistics Canada (2003).

5 The YITS includes a set of replicate weights to adjust for the effects of both the clustering and the stratification characteristics of the survey. Unfortunately, they make it impossible to use standard procedures in many standard statistical packages. This problem affects our choice of statistical model, as discussed further below.

6 If individuals still in high school are excluded from the analysis, participation rates are biased to the degree these individuals do or do not eventually go on to post-secondary education relative to the general population. If, alternatively, individuals still in high school are counted as non-PSE participants, a definite downward bias is introduced to participation rates, whereas a positive bias results if it is assumed that current high school students will go on to post-secondary education.

Other sample restrictions were kept to a minimum in order to make the analysis as representative as possible of all potential post-secondary education participants. We thus deleted only those who indicated they did no high school in Canada, those who came to the country after 10 years of age, and those who gave unclear responses, missing values, and certain "don't know" and "do not apply" responses for the key variables used in the analysis, these amounting to a very small number of observations in each case.

The resulting samples included 6,037 observations for the SLS, and 13,517 for the YITS. Because the YITS sample is much larger than the SLS, the results tend to have lower standard errors.

III.2 The Participation Measures

The specific variables used to indicate participation in post-secondary education are i) Any Post-Secondary and ii) University—each as opposed to No Post-Secondary. Each measure is an indicator (0-1) variable representing participation at the indicated level or lower (or not). The broader measure includes all types of post-secondary education, including certain private training colleges, trade-vocational programs, community college programs, and essentially any other credited program for which an individual can qualify for a Canada Student Loan (i.e., the program must be at least 10 weeks in length and lead to a certificate or diploma). The university category includes not only undergraduate diplomas, but also all types of graduate and professional degrees, although there are very few of these in our samples (not surprising given the age of our samples). Individuals who have enrolled in more than one type ("level") of program are counted as having gained access to the "highest" in which they have participated.

The fact that the Any Post-Secondary category includes those who have gone to university, which is itself the second category, means that we look at a broader, and then a more restricted definition of access. This allows for a clearer interpretation of the results, especially in the context of the models, than a series of mutually exclusive definitions (e.g., trade-vocational, college, university).[7] We also present a selected set of participation rates for college alone in the appendix to allow readers to make such comparisons with other studies.

The detailed educational attainment variables used to construct the measures used in this analysis (Any Post-Secondary, University) differ slightly in the SLS and the YITS, since the YITS allows for a greater number of possible responses than the SLS. These variables can, however, be made very closely comparable with the categories available, as described in the appendix.

For both surveys, the access variables represent *participation* at the indicated level and not necessarily graduation; even if a respondent dropped out of a given program, that level of studies

7 This set-up allows us to use two simple model specifications, where we look at a broader definition of access, and then a narrower one (University). Coefficient estimates might, therefore, be generally expected to have the same signs in both equations, but be stronger in the second to the extent the underlying variables have a greater effect on university attendance than entry to other forms of post-secondary schooling. The alternative set-up would have been to use a multinomial logit model, but the interpretation of the results would have been less straight-forward and the replicate weights available in the YITS rendered the implementation of such an approach problematic.

is recorded. This corresponds to the usual definition of "access" found in the literature: having the opportunity to *enter* a given program. Continuing and completion are then considered as separate issues, commonly termed "persistence", and are not treated here. This definition of participation is also well-suited to our data, since the surveys capture individuals when they are relatively young and have, therefore, not generally had the chance to complete their studies.

III.3 Other Variables Used in the Analysis

The first set of family background measures used in the analysis pertains to parents' education level. The different levels are No High School (meaning less than high school completed),[8] High School (completed), College (some or completed), University (some or completed), and Don't Know. We present participation rates by these categories in the descriptive part of the analysis, and include these variables as regressors in the regressions. We also construct a single "years of education" variable in order to estimate an alternative specification of the model in which the parental education effects are represented in a single parameter.[9]

Family income is not available on either the YITS or the SLS. While this is in some sense disappointing, the omission is the result of a conscious decision on the part of Statistics Canada, which has determined that this information is generally unreliable when gathered from young people. Furthermore, it is not clear whose incomes should be included in a context where many individuals are in non-traditional living situations, such as living with step-parents.[10]

Another set of dummy variables represents the individual's family type when last in high school. The categories are: Two parents, Mother only, Father only, and Other. A set of variables representing the interaction between family type and parents' education were also created to allow the effects of parental education to differ along these dimensions (and vice versa).

A variable indicating that the respondent was an immigrant (representing those born out of Canada) was also used. We experimented with various sets of variables representing the individual's ethnic background, but these could not be constructed in a directly comparable fashion in the two databases, so they were deleted from the final analysis. While ethnicity is an interesting aspect of post-secondary access, including it in the models did not change the other background variables focussed upon here in any substantial fashion, so this aspect is left to other analyses.

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8 Separating those with some high school and those with no high school contributed nothing to the analysis.

9 This transformation uses the number of years that each level of education generally represents. The No High School category is split into its two components: Less than Grade 9 is given a value of 8, High School Incomplete, a value of 10. The remaining categories are given values of 12 for High School, 14 for College and 16 for University. This transformation follows established conventions.

10 It would also be appropriate to measure parents' incomes at a common age, such as at the point the decision to attend post-secondary education was made, further complicating the data collection problem.

Finally, a series of provincial variables is included. These represent where the student last went to high school. Interactions were also created between age and Ontario and Quebec to take into account the specificities of their school systems discussed above.

III.4 Trends in the Explanatory Variables[11]

Descriptive statistics for the variables used in the analysis are shown in Table 1. All have reasonable values. One important pattern is the clear increase in parental education levels from the SLS (1991) to the YITS (2000). To the degree post-secondary participation is positively related to parents' education, we would expect this alone to have driven access rates upward over time.

In the SLS, 78-79 percent of all respondents lived with both parents in high school, 12 percent lived in lone mother families, and 3-4 percent were with their fathers; young women were slightly more likely to live with their mothers, young men with their fathers. In the YITS, fewer individuals lived in two parent families, more than before (14-16 percent) lived with their mothers, and 3-4 percent still lived with their fathers. The remaining respondents lived in some other situation, such as alone, with some other guardian, or with friends; these numbers decreased slightly among young men and more markedly among young women. We are, however, reluctant to impart too much importance into these familial shifts based on these data alone, because the variables in the SLS and the YITS from which this information was derived are not exactly identical. The levels and trends are, however, consistent with other data.[12]

The set of provincial variables used in both surveys lined up about as one would expect and correspond to official population statistics.[13]

IV. Descriptive Analysis[14]

IV.1 Trends in Overall Participation Rates

Overall participation rates are shown in Table 2. In the SLS sample (1991), 51 percent of the male respondents and 61 percent of the female respondents in our samples (i.e., aged 19-20) had participated in some form of post-secondary education. These figures increased to 60 percent and 73 percent, respectively, in the YITS. Twenty-four percent of males and 28 percent of females had attained some level of university education in the SLS, while these numbers rose to 28

11 All numbers in this section have been appropriately weighted according to YITS and SLS specifications.

12 The SLS variables are quite simple, presenting only a few possible family types from which the above categories were created. The YITS, on the other hand, has upwards of 30 different categories, and while many of these are clear and well-defined, others include such obscure situations as "adoptive mother and stepfather", and "split custody—biological mother and other", and it was not entirely clear how to classify some of these.

13 Statistics Canada, Cansim II, Table 051-0001.

14 All descriptive and model results are given for 20 year-olds (alone) in Appendix Tables B.1 to B.6.

percent and 36 percent in the YITS. Recall that the Any Post-Secondary numbers include all levels of higher education, up to and including university, while the University numbers are for that level alone.[15] Overall post-secondary participation rates thus rose over time.

We also show participation rates for college (and below) alone—that is, without university—overall and by various characteristics, including family type, parental education, and province, in Appendix Tables A.1 and A.2. For the reasons explained elsewhere in the paper, we find this to provide a less interesting perspective than the Any Post-Secondary and University categories that we focus on, but these extra results will permit certain comparisons with other work which some readers might find useful.

By sex, females had higher participation rates than males for both measures of post-secondary participation in both periods, but pulled further ahead from 1991 to 2000. In absolute terms (the first part of the right-hand panel of Table 2), females' participation increased by 12 and 8 percentage points in terms of the Any Post-Secondary and University measures, respectively, versus 9 and 4 percentage points for males. In relative terms, the female participation rates increased by 20 and 28 percent (Any Post-Secondary, University), versus 17 and 16 percent for males—the gender gap thus widened in relative terms as well as in absolute ones.

IV.2 Participation Rates by Parental Education Level

Post-secondary participation is strongly related to parents' education, as shown in Table 3 and Figure 1. For two parent families we use the highest level of education of the mother and father. Figure 2 compares the results for this measure against those obtained when the average level of education of the two parents is used, and then for cases where the two parents have the same level of education. The patterns are similar across all three measures.

Each higher level of parental education is, in almost every case, associated with a higher rate of both Any Post-Secondary and University participation. This holds for both male and female respondents, for both two parent and mother only families, and in both surveys.

The likelihood of going on to university is, in particular, much higher for the children of university-educated parents than for the children of parents with any other education level. Respondents are in almost every case over three times as likely to go to university if one of their parents has university education as opposed to having No high school. The patterns for Any Post-Secondary participation are similar, but much less pronounced.

Furthermore, this disparity in post-secondary participation by parental education level seems to have increased over time. While participation rates rose at most parental education levels, the increases were generally smaller, or even negative, for some of the lower education categories, especially for males, while the increases were generally greater at the higher parental education levels, especially for those with university-educated parents. In short, it appears that family

15 Participation rates can be defined in many ways. Certain standard measures are based on the percentage of individuals of a certain age group (e.g., 18-24) currently enrolled, others on the educational attainment of adults of all ages. The rates reported here do not, therefore, necessarily correspond to other published figures.

background, at least as measured by parents' education, became a more important determinant of post-secondary access in the 1990's. This finding holds, and in fact in some ways becomes clearer, in the regression analysis that follows.[16]

More specifically, and focusing on two parent families, for males, the rates of going on to any post-secondary education in 1991 were 43.4, 52.6, 62.8, and 72.0 percent, respectively, for those with parents with less than high school completed, high school completed, college, or university education, while in 2000 the rates were 41.6, 51.2, 68.9, and 81.0 percent respectively (see Table 3). Participation rates thus declined for the lower two education groups, whereas they rose significantly for the higher groups. For females, overall participation rates were 51.9, 58.9, 75.9, and 83.0 in the earlier period, and 55.1, 65.9, 80.6, and 88.6 in the later period. The rates thus rose everywhere, but least for the lowest parental education group, the most for the highest group, and in between these for the other groups.

Turning to participation at the university level, for men, the 4 sets of participation rates (by parental education level) were 13.0, 19.8, 28.9, and 48.7 in the earlier period, and 12.4, 18.3, 27.9, and 52.5 in the later period. Rates thus rose only for those with university-educated parents, while declining for those with less educated parents. For females, university participation rates were 17.6, 27.1, 38.9, and 50.4 percent in the earlier period, and 17.9, 27.8, 39.5, and 61.7 in the later period. They were, therefore, effectively stagnant for the three lower education groups, while they rose substantially for those with university-educated parents.

The patterns by sex previously seen at the overall level are largely repeated here: in most cases, male participation rates generally fell further behind the female rates for given parental education levels. In particular, for university participation, female participation rates rose marginally at the lower parental education levels, but increased substantially for those with university-educated parents, whereas for males, university participation rates declined slightly at the lower parental education levels, and rose much less for those with university parents. These patterns are, however, more mixed for the Any Post-Secondary measure of access, where males at the two lower parental education levels had declines in their participation rates, whereas females had increases, but participation rates increased more for males than females at the two higher parental education levels.

16 This finding contrasts somewhat with Corak, Lipps and Zhao (2003), who report decreases in participation rates at upper and middle family income levels, and increases for those from lower income families. There are a number of possible reasons for this difference. First, their data go only to 1997. Second, they use family income, not education, which might be especially pertinent in a context where family incomes shifted significantly over the period covered. Third, the major part of their analysis is based on Survey of Consumer Finance data, which have properties with respect to sampling young people and associating them with their family backgrounds that are likely to leave them less consistently representative of the underlying population than the SLS and YITS databases used here. Finally, they do not control for family type, and the observed increases for those at the lowest income levels are probably capturing the increases among those from single parent families noted here (i.e., it is at least partly a family type story rather than an income story per se). It is also worth noting that the Corak, Lipps and Zhao results appear to be at least somewhat inconsistent with those reported by Zhao and de Broucker who, using SLID data, show a clearer ordering of participation rates, especially at the university level, by family income level for the early-through-mid 1990's.

Looking back at the overall participation rates (Table 2), these breakdowns of participation rates by parental education level also indicate how a significant proportion of the overall gains were—as would be expected—due to the increases in average parental education levels (shown in Table 1), since the increases in participation rates at any given education level were generally smaller, and more mixed, than the overall gains.

IV.3 Participation Rates by Family Type

Family type has a large effect upon the likelihood of post-secondary participation. This is again seen in both Table 3 and Figure 1 (by level of parents' education), and in Table 4 (across all parental education levels). In the SLS, the University participation rate for males who lived in a two parent family was 27 percent. The comparable rates were 9 percent for father only families, and 15 percent for mother only families. Those living in any other arrangement had a participation rate of 14 percent.

However, while family type remained a strong indicator of post-secondary participation in the YITS data, there was some convergence over time, best seen in the increases in participation rates for individuals in mother only families generally exceeding the growth rates for two parent families (Table 4). This general pattern also holds when rates are broken down by level of parents' education (Table 3, Figure 1). In a context where children from lone-parent families are typically found to face many disadvantages, this is an important development.[17]

IV.4 Participation Rates by Province

The participation rates by province depicted in Table 5 reveal significant differences in post-secondary and university participation along this dimension. The Any Post-Secondary participation rate in Quebec is especially high, corresponding to the consideration of CEGEP (Quebec's hybrid of high school and post-secondary education) as a type of post-secondary institution, while Ontario's rates reflect the extra year of high school in that province (ended in 2003).

Interestingly, while most provinces had moderate to substantial increases in the rates of post-secondary participation in the 1990's—using both the Any Post-Secondary and University measures—there appears to be no relationship between these changes and tuition rate policies. Quebec, for example, had among the smallest tuition rate increases, and Nova Scotia among the greatest, but the increases in participation rates were relatively small in the former and high in the latter.

Tuition fees are, of course, but one influence on participation rates. And while higher fees would surely reduce the demand for post-secondary education, especially among individuals who are more "price sensitive", including (presumably) those from lower income families, other factors have clearly been working in the opposite direction on the demand side, while capacity

17 These results must, however, be qualified by the fact that the family type definitions do not match up absolutely perfectly between the two surveys, as discussed earlier. Nevertheless, the results are strong, and changing the family definition rules does not seem to affect these findings in any substantial manner.

constraints have surely played a role as well, especially over a period of general retrenchment of the post-secondary system, universities in particular. In any event, the results point to the need to look at participation rates—and the effects of tuition rates on participation rates—in a broader framework which takes these other factors into account.[18]

V. The Models

V.1 Specification of the Models

We employ a simple linear probability regression model, treating the two access measures—Any Post-Secondary and University—as the dependant variables.[19] In the first set of results, dummy variables are used to represent the different levels of parents' education (representing the highest level of education of the two parents in the case of two parent families), as well as family type, immigrant status, province, age, and age-province interactions in the case of Quebec and Ontario. The models also include a full set of interactions to allow the effects of parents' education to differ by family type. The omitted categories are having parents with a schooling level of completed high school, being in a two parent family, living in Ontario, and being 20 years of age. Separate regressions are run for males and females.

We also estimate a set of models where the dummy variables representing parents' education are replaced with a single linear term (described above) in order to capture the parental education effects with a single parameter, thus representing the average effects across all levels while ignoring the underlying non-linearities.

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18 See Finnie (forthcoming, 2004) for such an approach.

19 A more statistically appropriate limited dependent variable specification, such as a logit or probit model, was not employed for a number of reasons. First, the replicate weights available on the YITS cannot be used with these more sophisticated specifications in standard statistical packages (including SAS and STATA). Second, the coefficient estimates are directly interpretable in probability terms, rather than requiring transformation into probability space from the raw coefficients produced by the logit and probit techniques, which makes them more accessible to a broader readership. Third, linear probability models can be shown (Moffitt, 1999) to generate results very similar to probit and logit models when the mean of the dependent variable—in this case participation rates—are not close to zero or one, as is the case here. In any event, the specifications were estimated using a probit model with the SLS data, for which the weighting scheme is easier, and generated very similar results to those shown here. This suggests that the linear model does a good job of capturing the key relationships of interest.

The model is ad hoc, in the sense that it is not grounded in a utility maximization framework, because that would require modelling the various factors that affect the participation choice. As noted elsewhere, this would include those that affect its rate of return, its affordability, and individuals' perceptions, preferences, and preparations. Furthermore, the system is supply constrained, and this disequilibrium would have to be taken into account. In the end, in this paper we estimate nothing more than a reduced form model which includes some of the key background elements which enter individuals' opportunities and constraints. See Card (2001), Carneiro and Heckman (2002), and Kane (2001) for efforts to do more structural modelling to get at the role of credit constraints, in particular, in participation decisions. Such more specific investigations could be one avenue of future research with the data used here.

V.2 Model Results

Parental Education

The effects of parental education seen in the simple cross-tabulations shown above generally hold up, and in some ways even become clearer, in the regression models. Holding other factors constant, individuals with more educated parents have significantly higher rates of post-secondary participation than those with less educated parents.

Looking first at the parents' education variables in the top part of Table 6a (i.e., the categorical variable specification but without taking the interactions between parental education and family type into account), we see that all the parental education coefficient estimates have the expected signs and almost all are statistically significant (particularly in the YITS samples, aided by the larger sample sizes). The variables indicating No High School are negative, while those representing College and University (all relative to High School Completed) are positive, and in most cases strongly so, especially for the latter. (The "Don't Know" effects are the most negative of all.) These patterns hold for both males and females, and for the Any Post-Secondary and University participation models, but having university-educated parents is especially strongly related to university attendance.

Furthermore—and again consistent with the simple tabulations shown earlier—the influence of parents' education appears to have generally increased over the 1990's. This is seen in the coefficient estimates for both the Any Post-Secondary and University models being almost uniformly stronger in the YITS samples than the SLS. For example, having a university-educated parent rather than one with high school is associated with an increase in the probability of going on to post-secondary studies of between 19.5 and 28.8 percentage points across the four models in the SLS data, and between 22.6 and 35.5 percentage points in the YITS data.

This overall increase in the importance of parental education is seen even more clearly in the specifications with the single linear parental variable ("years of education") shown in Table 6b: in every case, the coefficient estimates are substantially larger in the YITS data than the SLS data.[20] Overall, the linear models indicate that each extra year of parents' education increases the probability of going on to post-secondary schooling between 4.5 and 5.0 percentage points in the SLS data, and between 5.6 and 7.1 percentage points in the YITS data. These are large—and increasing—effects.

Family Type

The family type effects can be first seen in the categorical variable specification (Table 6a). In almost every case, the coefficient estimates on the father only, mother only, and other family type indicators—all relative to two parent families—are of the expected negative sign. Living in a single parent or other type of family is thus generally associated with lower post-secondary participation than living in a two parent family, and this—like the parental education effects—holds for the Any Post-Secondary and University models alike. But despite the consistency of

20 In relative terms, the YITS equation coefficient estimates on the parental education variable in these linear education models are 46, 17, 46, and 42 percent greater, respectively (i.e., working across the four models), than the SLS estimates

this overall pattern and the correspondence of these findings with the simple cross-tabulations shown above, the majority of the individual coefficient estimates are not statistically significant, and many of the effects are quantitatively small.

However, since the categorical specifications also include interactions between parental education and family type, the family type coefficients on their own directly represent the differences for the omitted High School parental education situation only, while the interactions pick up any differences in the family type effects by education level (relative to the high school group). But since most of the family-education interactions are again not statistically significant, the patterns by family type just described would seem to generally hold across all parental education levels: the mostly negative coefficients generally point to lower participation rates for those from mother only, father only and other family types relative to those from two parent families, but few of the estimates are individually statistically significant.

That said, the interaction terms just discussed are in most cases based on relatively small numbers of observations (i.e., those having the particular family type *and* parents of the indicated education level), so we are asking quite a lot of the data with this specification. An alternative perspective is offered by the linear parental education model in Table 6b. Focussing on mother only families—the largest and most important group, six of the eight interactions are negative, even if only three are statistically significant, these all being in the YITS samples. Taken together, the results suggest that the relationship between parental education and post-secondary access might be somewhat flatter—parents' education levels matter less—for mother only families than two parent families, especially in more recent years.[21]

Father's Versus Mother's Education

Still with parental education, Table 7 shows the separate effects of mother's and father's education on participation rates for two parent families (only).[22] The top panel employs the categorical treatment of parents' education, the bottom the linear treatment. The latter best shows the findings of greatest interest.

Both father's and mother's education have (independently) strong effects on access to post-secondary education: in every model both sets of parental education variables are extremely significant in terms of both the magnitudes of their effects and their statistical significance. Overall, an additional year of father's education is associated with a 2.3 to 3.6 percentage point increase in the probability of going on to Any Post-Secondary education, and from 2.1 to 4.7 percentage points in the University models. For mother's education, the range of effects is from 2.7 to 3.8 in the Any Post-Secondary models and from 2.7 to 4.2 in the University models. These ranges of effects are consistent with the single parental education variable seen above.

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21 To calculate differences in participation rates by family type at a given education level, both the general family type indicator (i.e., the intercept shifts) and the slopes on the education variable must be taken into account. Hence, even in those cases where the family type indicator is positive, the participation rates are predicted to be lower for those of the given family type (relative to two parent families) once all the relevant parental education effects are taken into account.

22 This part of the analysis is restricted to two parent families so as to not confound the effects of the sex of the parent with family type effects.

The results also indicate that the influence of father's education rose over time in all four models, whereas the changes in the effects of mother's education were more mixed, rising in two cases, and declining in two other cases. A rising importance of father's education would perhaps point to an increased role of financial resources in determining post-secondary access, since family income is more strongly related to father's education than mother's.

Province and Age

One main purpose of including the province variables is to control for various unobserved characteristics of provinces which affect participation rates, including income levels, other demand side factors, and the general availability of post-secondary education (e.g., the number, location, and capacity of different kinds of post-secondary institutions). But the regression results for these variables also prove interesting in their own right. They need to be read while remembering the models also include a dummy variable which captures the tendency of 19 year-olds to have lower participation rates than 20 year-olds, and interactions of that age dummy with Ontario and Quebec which allow for different patterns by age in those jurisdictions (corresponding to the CEGEP system and Ontario having grade 13).

The age variable (indicating 19 year-olds) is negative, as predicted, in seven of the eight equations (both Tables 6a and 6b), although it is statistically significant in just around half the cases. The interactions of the age 19 indicator variable with Ontario and Quebec are more mixed than might have been expected, indicating that the participation patterns among 19 year-olds reflect more than just the peculiarities of the post-secondary systems in those provinces.[23]

Beyond that, some of the more interesting findings are as follows, where it should be understood that the provincial coefficients effectively capture the differences in participation rates between 20 year-olds in the indicated province and those of the same age in Ontario. Prince Edward Island is characterised by lower Any Post-Secondary participation rates, significantly among females. Nova Scotia has higher university participation rates in the more recent YITS data, whereas this was not the case in the SLS data. Quebec has generally higher participation rates for any post-secondary, but lower rates for university (both males and females). Saskatchewan has tended to have lower Any Post-Secondary rates, especially among females. Alberta shows lower participation rates among females (both measures). The other provincial effects are small and/or mixed.

VI. Conclusion

This paper has examined the relationship between family background and participation in the post-secondary education system using the 1991 School Leavers Survey and the 2000 Youth in Transition Survey. The analysis thus looks at access using two directly comparable datasets straddling a period characterised by many important developments in post-secondary education and rising concerns regarding access.

23 The sometimes positive coefficients on the 19 x Ontario interaction is, for example, picking up the general difference in participation rates in Ontario in combination with the effects of having grade 13.

The most important findings may be summarised as follows:

- Overall participation rates increased over the 1990's, but female participation rates increased at higher rates than males' to widen the gender participation gap, especially at the university level.
- Participation rates increased most among individuals with more highly educated parents, especially those with university education, while the increases were smaller, or there were even declines, for those from lower education families.
- The regression analysis shows that even after controlling for certain other factors that affect post-secondary participation (i.e., age and province of residence), parents' education has strong effects upon both Any Post-Secondary and University participation for males and females alike. Furthermore, the effect of parental education is again seen to have increased, thus indicating a widening in post-secondary participation opportunities by family background in the 1990's.
- Family type also has a strong influence on post-secondary and university participation, with young people from two parent families gaining access at considerably higher rates than those from single parent and other types of families. But in contrast to the findings by parental education, the gaps between two parent and mother only families, in particular, narrowed from 1991 to 2000.
- In comparing the effects of mother's versus father's education (in two parent families) on access, both influences appear to be (independently) significant, but the latter seems to have increased more than the former over the period in question, perhaps suggesting that the availability of financial resources has became a more important factor in determining access.
- Participation rates have increased across almost all provinces, but the pattern of increases does not seem to be related to tuition rates, with some of the low tuition-increase provinces (e.g., Quebec) having relatively small increases, and some of the higher tuition-increase provinces (e.g., Nova Scotia) having some of the greatest increases.

These results are interesting for a number of reasons. First, although post-secondary participation is determined by many factors relating to its net benefits, its affordability, and individuals' perceptions, preferences, and preparation, as well as the capacity of the system, these findings show that the tuition increases of the 1990's have not prevented overall participation rates from rising.

The higher fees may, however, provide part of the explanation for why participation rates have generally grown more for those from higher education families, especially those with university education, than those from lower education families—a finding which has potentially important implications regarding the equality of access to post-secondary education in this country.

The analysis is not, though, able to identify the specific causes of the (growing) differences in participation rates by family education level. Possible explanations include financial barriers,

differing perceptions of the costs and benefits of post-secondary schooling and other aspects of individuals' "preferences" for post-secondary education, similarly unequal preparation for post-secondary education at the high school level and before, and other social and economic factors. Unfortunately, not knowing the underlying causes of the (widened) differences in participation rates handicaps policy makers, because different causes imply different policy remedies. But identifying the role of each of these factors in the overall participation gap lies beyond the scope of this paper, and we leave that considerable challenge to future research projects.

Another interesting finding is that although important gaps remain between the post-secondary participation rates of two parent and single parent (and other) families, these differences—contrary to those by parental education level—narrowed through the 1990's. This is an important finding, especially in a context where the number of such families continues to grow. This analysis does not, however, again, tell us *why* single parent families have at least partly caught up to others, and further research will be required to provide these explanations, even as this again represents a significant challenge in terms of the data and analytical approaches required.

A third set of findings pertains to the differences in levels and trends in participation rates by province. These would appear to indicate that post-secondary participation is determined by much more than tuition fees, and point to the importance of other factors in determining post-secondary participation, including the student financial aid system, individuals' attitudes and preparations for post-secondary education, and the structure and capacity of the system.

In closing, the basic goal of this paper was to provide an empirical basis for discussions pertaining to access to post-secondary education in this country, especially as it pertains to family background. While the analysis is limited in some ways, these results should help provide a basis for future studies of access as it pertains to family background and contribute to the empirical context for the related debates.

Appendix: The Post-Secondary Indicators

The following table indicates the information available in each survey used to identify whether or not the individual was a post-secondary education participant, and if so, at what level. Note that those currently enrolled in high school at the time of the survey were deleted from the analysis. See the text for further discussion.

Educational Attainment Classification	School Leavers Survey	Youth in Transition Survey
No Post-Secondary	• Continuer (still enrolled in HS) • Not Applicable (no school beyond HS)	• A school not above high school • A Quebec secondary school or school board • Valid Skip (no school beyond HS)
Post-Secondary	• Other (post-secondary) program	• Another school above high school
Trade-Vocational	• Trade/vocational program • A course offered by a Private Training Institution	• A publicly-funded technical institute, or a trade/vocational school • A private business school or private training institute
College	• College program	• A community college or CEGEP
University	• University program	• A university • A university college (may grant university degrees)
(drop record)		• Don't Know • Refused • Not stated

In both surveys, respondents could not claim a particular level of education unless they were, or had been, enrolled in an actual program. The SLS specified this exactly, asking "Did you take this (training or education) as part of a program or a single course?" Those who responded "program" were then fitted into one of the above categories. The YITS required that the respondent be taking or have taken some education toward a diploma, certificate, or degree above the high school level, and is thus slightly less specific in this specification. It seems doubtful, however, if this slight difference would affect the post-secondary indicators used here to any significant degree.

Table 1 -- Descriptive Statistics

	Mean (%)				Change (%)			
	Males		Females		Absolute		Relative	
	SLS	YITS	SLS	YITS	Males	Females	Males	Females
Parental Education								
Don't Know	10.5	5.8	5.9	4.0	-4.6	-1.9	-44.3	-32.8
No High School	21.9	9.3	25.8	11.0	-12.6	-14.8	-57.5	-57.3
High School	23.3	32.9	23.5	30.9	9.6	7.4	41.2	31.4
College	14.6	20.9	16.3	25.1	6.3	8.8	43.1	53.8
University	24.0	27.0	21.3	25.2	3.0	4.0	12.5	18.7
Years of Education								
Parent (highest)	8.6	9.7	8.7	9.5	1.1	0.7	12.5	8.5
Mother	9.4	10.7	9.8	11.3	1.3	1.5	13.8	14.9
Father	10.7	12.1	10.9	12.3	1.4	1.4	12.7	13.0
Family Type								
Two Parents	79.1	78.5	78.3	77.6	-0.6	-0.7	-0.8	-0.9
Father Only	3.5	3.6	2.5	2.7	0.1	0.1	3.2	5.6
Mother Only	11.7	13.8	12.1	16.0	2.1	3.9	17.9	32.8
Other	5.7	4.0	7.2	3.7	-1.6	-3.4	-28.6	-47.7
Age								
19	45.9	48.4	47.0	49.5	2.5	2.4	5.4	5.1
20	54.1	51.6	53.0	50.5	-2.5	-2.4	-4.6	-4.6
Immigrant	6.7	8.8	7.3	8.5	2.2	1.2	32.4	16.1
Province								
Newfoundland	2.9	2.4	3.5	2.2	-0.5	-1.3	-18.7	-36.1
Prince Edward Island	0.6	0.5	0.6	0.5	0.0	-0.1	-8.2	-20.1
Nova Scotia	3.8	3.1	3.4	3.1	-0.7	-0.3	-19.3	-8.5
New Brunswick	3.1	2.5	3.5	2.6	-0.6	-0.9	-20.6	-26.7
Quebec	23.7	25.3	26.1	24.8	1.6	-1.3	6.8	-4.8
Ontario	34.6	35.9	34.0	36.4	1.3	2.3	3.8	6.8
Manitoba	4.4	3.7	4.3	3.7	-0.8	-0.6	-17.4	-13.6
Saskatchewan	4.2	3.8	4.2	3.7	-0.4	-0.5	-10.0	-12.4
Alberta	10.3	10.2	9.2	9.7	0.0	0.5	-0.4	5.6
British Columbia	12.4	12.5	11.2	13.0	0.1	1.9	0.8	16.7

In this and the following tables, the change columns refer to the difference between the SLS and the YITS. The absolute numbers represent the change in actual percentage points, the relative numbers express those changes relative to the initial (SLS) levels. For example, the percentage of males with university-educated parents rose from 24.0 to 27.0 percent from the SLS to the YITS, thus representing an absolute change of 3.0 and a relative change of 12.5 percent.

In two parent families, parental education represents the higher of the mother and father's education (see text). The different types of parental education do not sum to 100 because parental education is not listed if a child lives without his or her mother and father.

Table 2 -- Overall Post-Secondary Participation Rates

	Mean (%)				Change (%)			
	Males		Females		Absolute		Relative	
	SLS	YITS	SLS	YITS	Males	Females	Males	Females
Post-Secondary Participation								
None	48,8	40,0	39,4	27,2	-8,8	-12,2	-18,0	-30,9
	(0,9)	(0,9)	(0,9)	(0,8)				
Any Post-Secondary	51,2	60,0	60,6	72,8	8,8	12,2	17,2	20,1
	(0,9)	(0,9)	(0,9)	(0,8)				
University	23,8	27,5	28,4	36,3	3,7	7,9	15,6	27,8
	(0,8)	(0,9)	(0,8)	(0,9)				

Values in brackets are standard errors.

Table 3 -- Post-Secondary Participation by Parental Education Level

	Participation Rates (%)				Change (%)			
	Two Parents		Mother Only		Absolute		Relative	
	SLS	YITS	SLS	YITS	Two Parents	Mother Only	Two Parents	Mother Only
MALES								
Any Post-Secondary								
Parental Education								
No High School	43.4	41.6	25.3	32.8	-1.8	7.6	-4.3	29.9
	(1.9)	(3.9)	(3.7)	(6.2)				
High School	52.6	51.2	40.1	43.7	-1.4	3.6	-2.7	8.9
	(2.0)	(1.8)	(5.2)	(3.7)				
College	62.8	68.9	48.7	61.5	6.1	12.7	9.7	26.1
	(2.9)	(1.9)	(8.8)	(5.4)				
University	72.0	81.0	58.2	79.6	9.1	21.3	12.6	36.6
	(2.2)	(1.5)	(7.7)	(4.1)				
University								
Parental Education								
No High School	13.0	12.4	9.2	9.8	-0.6	0.6	-4.8	6.3
	(1.3)	(2.2)	(2.5)	(4.3)				
High School	19.8	18.3	11.2	13.5	-1.5	2.3	-7.4	20.7
	(1.6)	(1.2)	(3.3)	(2.8)				
College	28.9	27.9	18.1	23.5	-1.0	5.4	-3.5	29.9
	(2.8)	(1.9)	(6.8)	(5.0)				
University	48.7	52.5	32.0	41.7	3.8	9.7	7.8	30.2
	(2.5)	(2.0)	(7.3)	(6.2)				
FEMALES								
Any Post-Secondary								
Parental Education								
No High School	51.9	55.1	32.2	63.5	3.2	31.3	6.2	97.4
	(1.9)	(3.5)	(3.9)	(5.2)				
High School	58.9	65.9	52.6	62.3	6.9	9.7	11.7	18.4
	(2.2)	(1.5)	(5.2)	(3.8)				
College	75.9	80.6	46.4	69.7	4.7	23.3	6.2	50.1
	(2.5)	(1.5)	(7.1)	(4.6)				
University	83.0	88.6	62.7	87.9	5.7	25.2	6.8	40.1
	(1.9)	(1.1)	(7.5)	(3.3)				
University								
Parental Education								
No High School	17.6	17.9	10.2	22.0	0.4	11.8	2.1	115.2
	(1.5)	(2.5)	(2.5)	(5.2)				
High School	27.1	27.8	22.7	22.2	0.6	-0.6	2.3	-2.5
	(2.0)	(1.4)	(4.4)	(3.0)				
College	38.9	39.5	24.2	24.2	0.6	0.0	1.5	0.1
	(2.9)	(1.9)	(6.1)	(3.9)				
University	50.4	61.7	35.2	47.7	11.3	12.5	22.4	35.5
	(2.5)	(1.9)	(7.4)	(7.3)				

Values in brackets are standard errors.

Figure 1 -- Participation Rates by Parental Education Level

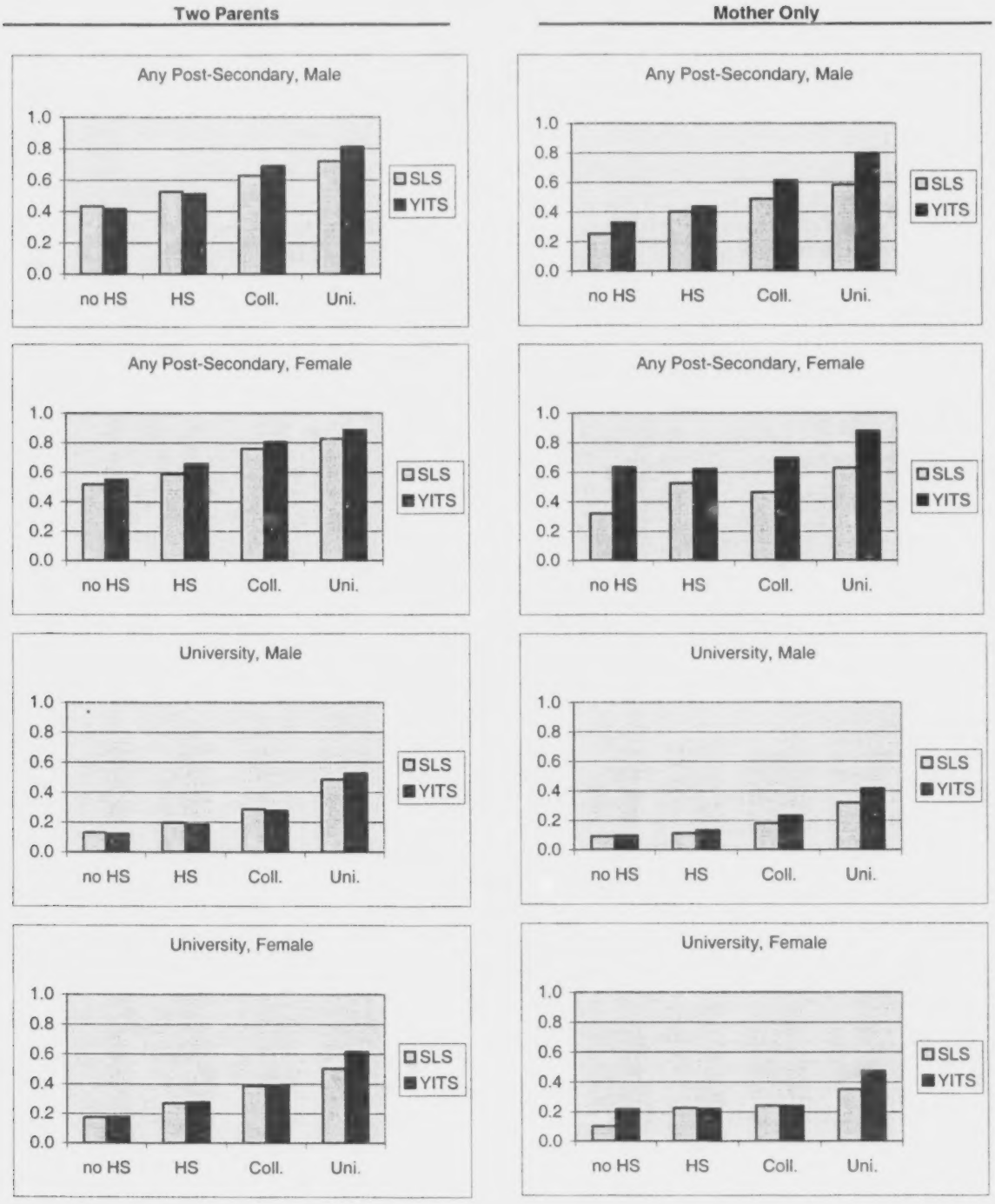
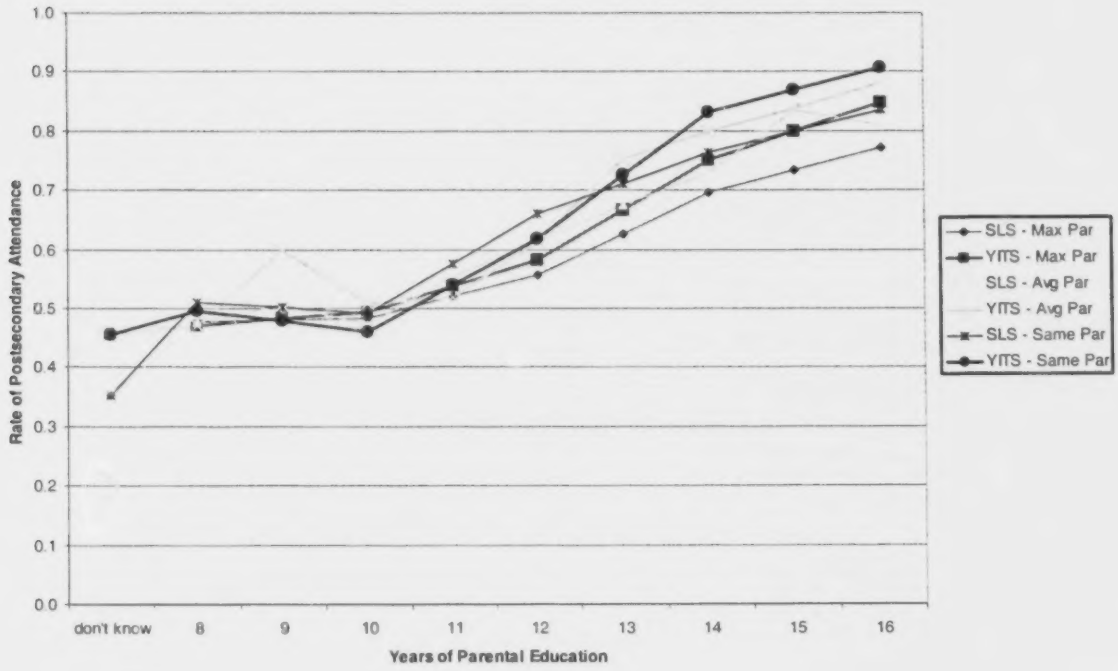


Figure 2 – Rate of Post-Secondary Attendance by Parental Education



Note: Max Par = highest level of education of the mother and father
Avg Par = average level of education of the two parents
Same Par = both parents have the same level of education

Table 4 -- Post-Secondary Participation by Family Type

	Participation Rates (%)				Change (%)			
	Males		Females		Absolute		Relative	
	SLS	YITS	SLS	YITS	Males	Females	Males	Females
Any Post-Secondary								
Two Parents	55.5	62.8	65.0	74.8	7.3	9.8	13.1	15.1
	(1.1)	(1.0)	(1.1)	(0.9)				
Father Only	36.8	49.5	51.3	64.7	12.7	13.4	34.6	26.1
	(4.1)	(4.9)	(5.0)	(4.4)				
Mother Only	37.4	50.1	46.7	66.8	12.7	20.2	34.1	43.2
	(2.5)	(2.4)	(2.5)	(2.2)				
Other	29.1	49.5	39.0	60.7	20.5	21.8	70.4	55.9
	(2.8)	(4.7)	(2.1)	(0.0)				
University								
Two Parents	26.5	29.8	31.6	39.3	3.3	7.7	12.4	24.4
	(0.9)	(1.0)	(1.0)	(1.0)				
Father Only	9.0	16.5	19.9	21.0	7.5	1.1	83.8	5.4
	(2.4)	(4.0)	(4.0)	(3.7)				
Mother Only	14.9	19.5	18.3	25.6	4.6	7.3	30.7	39.8
	(1.8)	(2.1)	(2.0)	(2.1)				
Other	13.6	20.5	13.6	31.5	6.9	17.9	50.7	132.4
	(2.1)	(3.2)	(1.4)	(4.5)				

Values in brackets are standard errors.

Table 5 -- Post-Secondary Participation by Province

	Participation Rates (%)				Change (%)			
	Males		Females		Absolute		Relative	
	SLS	YITS	SLS	YITS	Males	Females	Males	Females
Any Post-Secondary								
Newfoundland	36.2	64.4	46.0	71.9	28.1	25.9	77.7	56.4
	(2.7)	(4.2)	(3.0)	(3.3)				
Prince Edward Island	34.1	55.8	48.7	66.1	21.7	17.4	63.8	35.7
	(3.4)	(5.5)	(3.3)	(4.3)				
Nova Scotia	39.9	58.8	50.8	80.6	18.9	29.8	47.3	58.6
	(3.1)	(3.2)	(3.1)	(2.2)				
New Brunswick	39.1	54.4	50.8	73.6	15.3	22.7	39.3	44.7
	(2.7)	(2.7)	(3.2)	(2.8)				
Quebec	61.4	68.5	70.2	84.2	7.1	14.0	11.6	19.9
	(2.3)	(1.8)	(2.4)	(1.4)				
Ontario	51.3	61.1	63.2	72.8	9.8	9.6	19.2	15.2
	(2.5)	(1.6)	(2.2)	(1.5)				
Manitoba	37.9	55.1	56.8	65.5	17.2	8.7	45.4	15.2
	(3.1)	(3.1)	(3.1)	(2.9)				
Saskatchewan	42.3	54.9	50.7	67.1	12.6	16.4	29.9	32.4
	(3.4)	(3.3)	(3.1)	(2.5)				
Alberta	53.6	48.0	57.1	56.8	-5.6	-0.3	-10.5	-0.6
	(3.0)	(2.9)	(2.7)	(2.6)				
British Columbia	48.3	53.0	49.5	64.4	4.7	14.8	9.7	30.0
	(2.8)	(3.0)	(2.8)	(2.5)				
University								
Newfoundland	23.2	34.7	29.9	48.4	11.4	18.5	49.3	62.0
	(2.3)	(4.0)	(2.8)	(3.4)				
Prince Edward Island	27.9	36.2	32.4	43.3	8.3	10.9	29.7	33.8
	(3.2)	(4.9)	(3.1)	(4.2)				
Nova Scotia	27.1	40.4	36.1	60.0	13.3	23.9	49.1	66.3
	(2.8)	(3.2)	(3.0)	(2.7)				
New Brunswick	27.7	31.3	29.8	45.8	3.6	16.0	13.1	53.6
	(3.0)	(2.6)	(3.0)	(3.7)				
Quebec	10.3	12.7	15.7	19.9	2.4	4.2	23.0	27.0
	(1.4)	(1.4)	(1.9)	(1.7)				
Ontario	29.2	0.3	36.2	42.3	-28.9	6.1	-98.9	16.9
	(2.3)	(1.6)	(2.2)	(1.6)				
Manitoba	26.2	33.7	43.2	43.2	7.5	0.0	28.5	-0.1
	(2.8)	(3.0)	(3.1)	(3.2)				
Saskatchewan	27.6	34.7	36.8	45.8	7.1	9.1	25.7	24.7
	(3.1)	(3.5)	(2.9)	(2.9)				
Alberta	29.8	26.3	29.7	29.5	-3.6	-0.1	-12.0	-0.5
	(2.8)	(2.5)	(2.5)	(2.6)				
British Columbia	25.3	32.3	21.1	40.8	7.0	19.7	27.6	93.2
	(2.5)	(2.8)	(2.3)	(2.6)				

Values in brackets are standard errors.

Table 6a – Post-Secondary Participation Regression Results with Parental Education Dummy Variables

	Any Post-Secondary				University			
	Males		Females		Males		Females	
	SLS	YITS	SLS	YITS	SLS	YITS	SLS	YITS
Parental Education								
Don't Know	-0.227***	-0.144***	-0.216**	-0.125**	-0.070*	-0.073**	-0.115*	-0.078
	(0.063)	(0.046)	(0.087)	(0.054)	(0.041)	(0.031)	(0.062)	(0.048)
No High School	-0.112**	-0.113**	-0.101**	-0.121***	-0.050	-0.058**	-0.091**	-0.076**
	(0.050)	[0.045]	(0.048)	(0.037)	(0.037)	(0.025)	(0.041)	(0.032)
College	0.102*	0.170***	0.158***	0.134***	0.084*	0.108***	0.123**	0.138***
	(0.053)	(0.026)	(0.049)	(0.020)	(0.047)	(0.022)	(0.050)	(0.024)
University	0.195***	0.292***	0.220***	0.226***	0.288***	0.344***	0.252***	0.355***
	(0.045)	(0.023)	(0.041)	(0.018)	(0.043)	(0.023)	(0.046)	(0.023)
Family Type								
Father Only	0.156	-0.101	-0.054	-0.105	-0.094	0.002	-0.218**	-0.038
	(0.135)	(0.081)	(0.205)	(0.069)	(0.096)	(0.057)	(0.102)	(0.059)
Mother Only	-0.126	-0.096**	-0.075	-0.040	-0.088*	-0.023	-0.033	-0.030
	(0.088)	(0.041)	(0.092)	(0.039)	(0.053)	(0.030)	(0.078)	(0.033)
Other	-0.236***	-0.015	-0.195***	-0.040	-0.071	0.018	-0.146***	0.040
	(0.068)	(0.050)	(0.065)	(0.047)	(0.053)	(0.033)	(0.049)	(0.046)
Parental Education and Family Type Interactions								
Don't Know x Father Only	-0.217	-0.035	-0.35	0.022	-0.056	-0.100	0.117	-0.135
	(0.208)	(0.164)	(0.225)	(0.247)	(0.103)	(0.072)	(0.135)	(0.111)
No High School x Father Only	-0.414***	0.081	0.319	0.237**	-0.024	-0.009	0.333**	0.051
	(0.158)	(0.137)	(0.242)	(0.108)	(0.110)	(0.085)	(0.138)	(0.091)
College x Father Only	-0.262	-0.019	-0.407	-0.084	-0.150	-0.164**	0.045	-0.143
	(0.246)	(0.126)	(0.274)	(0.139)	(0.110)	(0.069)	(0.207)	(0.124)
University x Mother Only	-0.431**	0.03	0.168	0.086	-0.098	-0.057	0.237	-0.065
	(0.213)	(0.119)	(0.208)	(0.096)	(0.159)	(0.127)	(0.217)	(0.158)
Don't Know x Mother Only	0.077	-0.105	0.130	-0.173	0.066	-0.003	-0.033	-0.058
	(0.136)	(0.080)	(0.168)	(0.114)	(0.077)	(0.047)	(0.102)	(0.066)
No High School x Mother Only	-0.033	-0.011	-0.108	0.122*	0.034	0.033	-0.022	0.065
	(0.119)	(0.076)	(0.120)	(0.073)	(0.072)	(0.057)	(0.094)	(0.061)
College x Mother Only	-0.005	-0.012	-0.194	-0.091	0.003	-0.012	-0.076	-0.081
	(0.154)	(0.069)	(0.142)	(0.060)	(0.102)	(0.063)	(0.126)	(0.053)
University x Mother Only	-0.025	0.059	-0.111	0.009	-0.075	-0.065	-0.117	-0.082
	(0.132)	(0.058)	(0.147)	(0.049)	(0.103)	(0.069)	(0.130)	(0.076)
Province								
Newfoundland	-0.048	0.045	-0.126**	-0.023	0.017	0.054	-0.056	0.071*
	(0.057)	(0.042)	(0.059)	(0.041)	(0.049)	(0.043)	(0.055)	(0.042)
Prince Edward Island	-0.072	-0.074	-0.154**	-0.085*	0.055	0.031	-0.072	0.011
	(0.068)	(0.055)	(0.062)	(0.046)	(0.062)	(0.047)	(0.061)	(0.044)
Nova Scotia	-0.04	-0.025	-0.102*	0.038	0.035	0.093**	-0.010	0.161***
	(0.057)	(0.038)	(0.058)	(0.030)	(0.050)	(0.039)	(0.057)	(0.035)
New Brunswick	-0.017	-0.059*	-0.087	-0.010	0.062	0.013	-0.061	0.047
	(0.063)	(0.034)	(0.063)	(0.034)	(0.058)	(0.034)	(0.061)	(0.041)
Québec	0.146**	0.111***	0.072	0.052**	-0.100**	-0.127***	-0.131**	-0.194***
	(0.063)	(0.029)	(0.060)	(0.026)	(0.050)	(0.030)	(0.060)	(0.035)
Manitoba	-0.081	-0.044	-0.063	-0.103***	-0.003	0.033	0.042	-0.002
	(0.057)	(0.037)	(0.059)	(0.033)	(0.050)	(0.036)	(0.058)	(0.038)
Saskatchewan	-0.018	-0.047	-0.122**	-0.090***	0.031	0.043	-0.019	0.026
	(0.060)	(0.038)	(0.059)	(0.032)	(0.053)	(0.041)	(0.058)	(0.037)
Alberta	0.073	-0.130***	-0.099*	-0.197***	0.034	-0.054*	-0.126**	-0.151***
	(0.057)	(0.035)	(0.057)	(0.033)	(0.051)	(0.033)	(0.057)	(0.035)
British Columbia	0.008	-0.070*	-0.162***	-0.121***	-0.021	0.006	-0.195***	-0.038
	(0.057)	(0.037)	(0.059)	(0.032)	(0.051)	(0.035)	(0.054)	(0.034)
Age 19	-0.097***	-0.079***	-0.025	-0.052**	-0.021	-0.033	0.027	-0.045**
	(0.030)	(0.026)	(0.031)	(0.022)	(0.027)	(0.022)	(0.028)	(0.023)
Age and Province Interactions								
19 x Ontario	0.113*	-0.017	-0.03	-0.061*	0.059	0.000	-0.071	-0.028
	(0.068)	(0.036)	(0.067)	(0.035)	(0.061)	(0.036)	(0.065)	(0.039)
19 x Québec	0.102	-0.034	0.006	0.066**	-0.061	-0.100***	-0.204***	-0.080**
	(0.070)	(0.042)	(0.064)	(0.033)	(0.049)	(0.035)	(0.054)	(0.039)
Immigrant	0.035	0.014	0.076	-0.003	0.028	0.075**	0.028	0.03
	(0.070)	(0.035)	(0.059)	(0.031)	(0.059)	(0.034)	(0.057)	(0.032)
Constant	0.510***	0.564***	0.642***	0.724***	0.216***	0.227***	0.356***	0.354***
	(0.054)	(0.025)	(0.052)	(0.022)	(0.048)	(0.023)	(0.053)	(0.025)
Observations	3,002	6,667	3,035	6,850	3,002	6,667	3,035	6,850
R-squared	0.125	0.137	0.137	0.122	0.141	0.165	0.147	0.163

Standard errors in brackets. The asterisks indicate the following levels of significance: * 10% significance, ** 5% significance, *** 1% significance.

Table 6b – Post-Secondary Participation Regression Results with a Single Linear Parental Education Variable

	Any Post-Secondary				University			
	Males		Females		Males		Females	
	SLS	YITS	SLS	YITS	SLS	YITS	SLS	YITS
Parental Education								
Years of education	0.045***	0.066***	0.048***	0.056***	0.048***	0.070***	0.050***	0.071***
	(0.007)	(0.005)	(0.006)	(0.004)	(0.006)	(0.004)	(0.006)	(0.004)
Don't Know	0.297***	0.622***	0.335***	0.534***	0.463***	0.737***	0.449***	0.745***
	(0.105)	(0.086)	(0.114)	(0.079)	(0.081)	(0.066)	(0.089)	(0.075)
Family Type								
Father Only	-0.153	0.159	0.379	0.485**	0.061	0.368*	-0.050	0.498**
	(0.295)	(0.249)	(0.427)	(0.223)	(0.192)	(0.207)	(0.445)	(0.225)
Mother Only	-0.171	-0.164	-0.085	0.271*	0.097	0.229	0.084	0.373**
	(0.225)	(0.153)	(0.230)	(0.138)	(0.149)	(0.147)	(0.163)	(0.161)
Other	0.289***	0.753***	0.359***	0.619***	0.463***	0.830***	0.422***	0.865***
	(0.109)	(0.084)	(0.098)	(0.071)	(0.088)	(0.066)	(0.082)	(0.069)
Parent Education and Family Type Interactions								
Years of education x Father Only	0.001	-0.018	-0.032	-0.043**	-0.017	-0.031*	-0.004	-0.045**
	(0.025)	(0.019)	(0.032)	(0.018)	(0.017)	(0.017)	(0.037)	(0.019)
Don't Know x Father Only	0.094	-0.294	-0.788*	-0.568*	-0.208	-0.463**	-0.053	-0.674***
	(0.334)	(0.290)	(0.439)	(0.339)	(0.192)	(0.212)	(0.454)	(0.245)
Years of education x Mother Only	0.002	0.006	-0.007	-0.025**	-0.015	-0.020*	-0.013	-0.034***
	(0.018)	(0.011)	(0.019)	(0.010)	(0.013)	(0.012)	(0.014)	(0.013)
Don't Know x Mother Only	0.123	-0.036	0.139	-0.485***	-0.118	-0.254*	-0.151	-0.462***
	(0.248)	(0.171)	(0.270)	(0.171)	(0.159)	(0.152)	(0.176)	(0.171)
Province								
Newfoundland	-0.051	0.043	-0.136**	-0.022	0.020	0.047	-0.051	0.072*
	(0.057)	(0.043)	(0.058)	(0.041)	(0.049)	(0.045)	(0.055)	(0.042)
Prince Edward Island	-0.077	-0.078	-0.160***	-0.087*	0.053	0.030	-0.071	0.007
	(0.068)	(0.056)	(0.061)	(0.046)	(0.061)	(0.049)	(0.061)	(0.044)
Nova Scotia	-0.042	-0.027	-0.118**	0.036	0.032	0.086**	-0.013	0.156***
	(0.057)	(0.038)	(0.058)	(0.030)	(0.050)	(0.039)	(0.057)	(0.034)
New Brunswick	-0.02	-0.062*	-0.094	-0.004	0.057	0.009	-0.060	0.048
	(0.063)	(0.035)	(0.062)	(0.034)	(0.057)	(0.034)	(0.060)	(0.040)
Québec	0.147**	0.113***	0.075	0.065**	-0.092*	-0.129***	-0.120**	-0.177***
	(0.063)	(0.029)	(0.059)	(0.026)	(0.050)	(0.031)	(0.059)	(0.035)
Manitoba	-0.080	-0.050	-0.072	-0.101***	-0.002	0.031	0.042	0.000
	(0.057)	(0.037)	(0.059)	(0.033)	(0.050)	(0.037)	(0.058)	(0.038)
Saskatchewan	-0.018	-0.051	-0.132**	-0.090***	0.03	0.043	-0.022	0.021
	(0.060)	(0.038)	(0.058)	(0.032)	(0.053)	(0.041)	(0.058)	(0.037)
Alberta	0.070	-0.134***	-0.112**	-0.199***	0.027	-0.059*	-0.131**	-0.152***
	(0.057)	(0.035)	(0.057)	(0.033)	(0.051)	(0.033)	(0.057)	(0.035)
British Columbia	0.004	-0.074**	-0.170***	-0.120***	-0.027	0.004	-0.201***	-0.036
	(0.057)	(0.038)	(0.058)	(0.032)	(0.050)	(0.036)	(0.054)	(0.034)
Age 19	-0.095***	-0.079***	-0.023	-0.051**	-0.021	-0.038*	0.027	-0.041*
	(0.030)	(0.026)	(0.031)	(0.022)	(0.027)	(0.023)	(0.028)	(0.023)
Age and Province Interactions								
19 x Ontario	0.112*	-0.019	-0.046	-0.062*	0.056	0.001	-0.077	-0.031
	(0.068)	(0.036)	(0.067)	(0.035)	(0.061)	(0.036)	(0.065)	(0.039)
19 x Québec	0.105	-0.037	0.006	0.053	-0.066	-0.100***	-0.204***	-0.098**
	(0.070)	(0.042)	(0.064)	(0.033)	(0.050)	(0.035)	(0.054)	(0.038)
Immigrant	0.036	0.018	0.083	0.001	0.028	0.086**	0.035	0.046
	(0.070)	(0.035)	(0.058)	(0.031)	(0.058)	(0.034)	(0.056)	(0.032)
Constant	-0.015	-0.201***	0.094	0.062	-0.316***	-0.583***	-0.212***	-0.476***
	(0.101)	(0.075)	(0.091)	(0.060)	(0.081)	(0.058)	(0.082)	(0.059)
Observations	3,002	6,667	3,035	6,850	3,002	6,667	3,035	6,850
R-squared	0.121	0.132	0.132	0.121	0.127	0.152	0.145	0.154

Standard errors in brackets. The asterisks indicate the following levels of significance: * 10% significance, ** 5% significance, *** 1% significance.

Table 7 -- Post-Secondary Participation Regression Results -- Two Parent Families Only

	Any Post-Secondary				University			
	Males		Females		Males		Females	
	SLS	YITS	SLS	YITS	SLS	YITS	SLS	YITS
Regressions with Parental Education Dummy Variables								
Father's Education								
No High School	-0.072	-0.078***	-0.113**	-0.049*	-0.068	-0.074***	-0.053	-0.071***
	(0.053)	(0.030)	(0.047)	(0.028)	(0.042)	(0.020)	(0.045)	(0.027)
College	0.088	0.101***	0.035	0.098***	0.075	0.055*	0.022	0.094***
	(0.062)	(0.028)	(0.053)	(0.021)	(0.058)	(0.028)	(0.058)	(0.028)
University	0.118**	0.170***	0.039	0.147***	0.228***	0.236***	0.083	0.247***
	(0.057)	(0.026)	(0.045)	(0.022)	(0.055)	(0.032)	(0.058)	(0.030)
Mother's Education								
No High School	-0.073	-0.112***	-0.100**	-0.101***	-0.028	-0.054**	-0.132***	-0.072***
	(0.050)	(0.037)	(0.045)	(0.029)	(0.041)	(0.023)	(0.043)	(0.028)
College	0.084	0.109***	0.062	0.045**	0.028	0.066**	0.087	0.071***
	(0.056)	(0.027)	(0.047)	(0.020)	(0.055)	(0.030)	(0.056)	(0.027)
University	0.128**	0.140***	0.132***	0.099***	0.173***	0.174***	0.212***	0.161***
	(0.055)	(0.027)	(0.043)	(0.022)	(0.055)	(0.035)	(0.057)	(0.032)
Constant	0.548***	0.626***	0.810***	0.763***	0.272***	0.275***	0.478***	0.405***
	(0.065)	(0.027)	(0.053)	(0.024)	(0.062)	(0.029)	(0.067)	(0.029)
Observations	1,719	4,662	1,702	4,908	1,719	4,662	1,702	4,908
R-squared	0.11	0.132	0.113	0.127	0.159	0.176	0.159	0.176
Regressions with Linear Parental Education Variables								
Parental Education								
Year of Father's Education	0.028***	0.036***	0.023***	0.032***	0.037***	0.043***	0.021***	0.047***
	(0.008)	(0.005)	(0.007)	(0.004)	(0.007)	(0.005)	(0.007)	(0.005)
Year of Mother's Education	0.028***	0.038***	0.029***	0.027***	0.027***	0.037***	0.042***	0.032***
	(0.009)	(0.005)	(0.007)	(0.004)	(0.008)	(0.006)	(0.008)	(0.006)
Constant	-0.11	-0.248***	0.141	0.068	-0.435***	-0.653***	-0.279***	-0.516***
	(0.107)	(0.074)	(0.097)	(0.060)	(0.094)	(0.065)	(0.093)	(0.069)
Observations	1,719	4,662	1,702	4,908	1,719	4,662	1,702	4,908
R-squared	0.108	0.123	0.108	0.126	0.139	0.162	0.153	0.166

Samples restricted to those who lived with both parents and the education of each.
Standard errors in brackets -- * 10% significance; ** 5% significance; *** 1% significance

Table A.1 -- College Participation Rates (Overall, by Family Type and Province)

	Mean (%)				Change (%)			
	Males		Females		Absolute		Relative	
	SLS	YITS	SLS	YITS	Males	Females	Males	Females
Overalll	27.4	32.5	32.2	36.4	5.1	4.3	18.5	13.2
	(0.8)	(0.8)	(0.8)	(0.8)				
Family Type								
Two Parents	29.0	32.9	33.4	35.5	4.0	2.1	13.8	6.4
	(1.0)	(0.9)	(1.1)	(0.9)				
Father Only	27.8	33.0	31.4	43.7	5.2	12.3	18.7	39.1
	(3.8)	(4.3)	(4.7)	(4.8)				
Mother Only	22.5	30.6	28.4	41.3	8.1	12.9	36.2	45.3
	(2.2)	(2.3)	(2.3)	(2.4)				
Other	15.4	29.0	25.4	29.3	13.6	3.9	87.8	15.2
	(2.2)	(4.2)	(1.8)	(4.7)				
Province								
Newfoundland	13.0	29.7	16.1	23.5	16.7	7.4	128.4	45.8
	(1.9)	(5.9)	(2.2)	(2.7)				
Prince Edward Island	6.2	19.6	16.3	22.8	13.4	6.5	217.6	39.7
	(1.7)	(3.6)	(2.5)	(3.7)				
Nova Scotia	12.8	18.4	14.8	20.6	5.6	5.8	43.6	39.6
	(2.1)	(2.1)	(2.2)	(2.2)				
New Brunswick	11.4	23.1	21.0	27.8	11.7	6.8	102.9	32.2
	(1.8)	(2.2)	(2.6)	(3.4)				
Quebec	51.0	55.8	54.5	64.3	4.7	9.8	9.3	17.9
	(2.3)	(2.0)	(2.6)	(1.9)				
Ontario	22.1	27.7	27.0	30.5	5.6	3.5	25.5	13.0
	(2.1)	(1.4)	(2.0)	(1.5)				
Manitoba	11.7	21.4	13.6	22.3	9.7	8.7	83.4	64.0
	(2.0)	(2.5)	(2.1)	(2.7)				
Saskatchewan	14.7	20.3	13.9	21.3	5.6	7.4	37.8	52.8
	(2.4)	(2.3)	(2.1)	(2.2)				
Alberta	23.8	21.7	27.4	27.3	-2.1	-0.2	-8.7	-0.6
	(2.6)	(2.7)	(2.4)	(2.2)				
British Columbia	22.9	20.6	28.4	23.5	-2.3	-4.9	-10.0	-17.1
	(2.4)	(2.2)	(2.5)	(2.3)				

Values in brackets are standard errors.

Table A.2 -- College Participation by Parental Education Level

	Participation Rates (%)				Change (%)			
	Two Parents		Mother Only		Absolute		Relative	
	SLS	YITS	SLS	YITS	Two Parents	Mother Only	Two Parents	Mother Only
MALES								
Parental Education								
No High School	30.4	29.2	16.0	23.0	-1.2	7.0	-4.0	43.5
	(1.8)	(3.9)	(3.1)	(5.1)				
High School	32.9	32.9	28.9	30.2	0.1	1.3	0.2	4.4
	(1.9)	(1.6)	(4.8)	(3.4)				
College	33.9	41.0	30.7	38.0	7.1	7.3	21.0	23.9
	(2.9)	(2.2)	(8.2)	(5.6)				
University	23.3	28.5	26.2	37.9	5.2	11.7	22.5	44.4
	(2.1)	(1.8)	(6.9)	(5.8)				
FEMALES								
Parental Education								
No High School	34.3	37.2	21.9	41.5	2.9	19.5	8.3	89.1
	(1.8)	(3.4)	(3.4)	(5.5)				
High School	31.8	38.1	29.9	40.1	6.3	10.2	19.8	34.3
	(2.1)	(1.6)	(4.8)	(3.8)				
College	37.0	41.1	22.2	45.5	4.1	23.3	11.1	104.5
	(2.8)	(1.9)	(5.9)	(4.8)				
University	32.6	27.0	27.5	40.2	-5.6	12.7	-17.2	46.1
	(2.3)	(1.8)	(6.9)	(7.7)				

Values in brackets are standard errors.

Table B.1 -- Descriptive Statistics - 20 Year-olds Only

	Mean (%)				Change (%)			
	Males		Females		Absolute		Relative	
	SLS	YITS	SLS	YITS	Males	Females	Males	Females
Parental Education								
Don't Know	9.8	5.9	6.2	3.6	-4.0	-2.6	-40.4	-41.5
No High School	23.5	10.5	27.1	11.3	-13.0	-15.7	-55.4	-58.1
High School	23.1	32.4	24.6	31.3	9.3	6.7	40.2	27.3
College	13.3	20.2	15.4	24.8	6.9	9.4	51.8	61.2
University	23.3	27.1	20.3	25.0	3.9	4.8	16.6	23.5
Years of education								
Parent (highest)	8.7	9.5	8.9	9.5	0.9	0.6	9.8	6.7
Mother	9.2	10.7	9.6	11.3	1.5	1.6	16.4	16.8
Father	10.5	12.0	10.8	12.3	1.5	1.5	14.2	13.6
Family Type								
Two Parents	79.6	78.6	79.9	77.2	-1.0	-2.7	-1.3	-3.4
Father Only	3.5	3.5	2.5	2.8	0.1	0.3	1.8	11.5
Mother Only	10.0	13.9	11.1	16.1	4.0	5.0	39.7	45.5
Other	7.0	4.0	6.5	3.9	-3.0	-2.6	-43.3	-40.5
Immigrant	6.7	8.8	8.3	8.5	2.1	0.1	31.0	1.7
Province								
Newfoundland	3.2	2.2	3.0	2.2	-1.0	-0.8	-31.9	-27.8
Prince Edward Island	0.5	0.6	0.6	0.5	0.0	-0.1	8.1	-17.4
Nova Scotia	3.8	3.3	3.4	3.0	-0.5	-0.4	-14.0	-11.7
New Brunswick	3.1	2.4	3.3	2.6	-0.7	-0.7	-22.3	-21.0
Quebec	23.6	24.9	25.0	24.6	1.3	-0.3	5.7	-1.4
Ontario	35.3	36.3	36.3	36.4	1.1	0.1	3.0	0.3
Manitoba	4.4	3.5	4.1	3.8	-0.9	-0.4	-21.0	-8.5
Saskatchewan	4.0	4.0	4.2	3.8	-0.1	-0.4	-1.4	-9.5
Alberta	9.7	10.1	9.3	9.7	0.4	0.3	4.0	3.5
British Columbia	12.4	12.7	10.8	13.1	0.3	2.3	2.3	21.6

Parental Education represents the higher of the mother and father's education, if applicable. The different types of parental education do not sum to 100 because parental education is not listed if a child lives without his or her mother and father.

Table B.2 -- Overall Post-Secondary Participation Rates - 20 Year-olds Only

	Mean (%)				Change (%)			
	Males		Females		Absolute		Relative	
	SLS	YITS	SLS	YITS	Males	Females	Males	Females
Post-Secondary Participation								
None	47.7 (1.2)	35.7 (1.2)	37.9 (1.2)	24.4 (1.1)	-12.0	-13.5	-25.2	-35.6
Any Post-Secondary	52.3 (1.2)	64.3 (1.2)	62.1 (1.2)	75.6 (1.1)	12.0	13.5	23.0	21.7
University	24.3 (1.0)	30.3 (1.3)	30.8 (1.1)	40.0 (1.3)	6.1	9.2	24.9	29.9

Values in brackets are standard errors.

Table B.3 – Post-Secondary Participation by Parental Education Level - 20 Year-olds Only

	Participation Rates (%)				Change (%)			
	Two parents		Mother Only		Absolute		Relative	
	SLS	YITS	SLS	YITS	Two Parents	Mother Only	Two Parents	Mother Only
MALES								
Any Post-Secondary								
Parental Education								
No High School	45.8	39.8	25.4	38.8	-6.0	13.4	-13.1	52.7
	(2.5)	(4.9)	(5.0)	(8.9)				
High School	56.8	55.0	35.8	43.3	-1.8	7.5	-3.3	21.0
	(2.6)	(2.5)	(6.5)	(5.2)				
College	64.0	75.7	44.3	63.7	11.7	19.4	18.3	43.9
	(3.9)	(2.4)	(11.7)	(8.0)				
University	72.5	85.8	83.1	89.2	13.3	6.2	18.4	7.4
	(2.9)	(1.9)	(8.2)	(4.1)				
University								
Parental Education								
No High School	12.5	11.4	11.4	14.6	-1.0	3.2	-8.3	27.7
	(1.6)	(2.9)	(3.6)	(7.1)				
High School	23.5	18.8	13.5	14.4	-4.7	0.9	-20.0	6.7
	(2.2)	(1.7)	(4.7)	(4.3)				
College	31.8	30.6	32.4	29.1	-1.2	-3.4	-3.7	-10.4
	(3.8)	(3.0)	(11.0)	(7.8)				
University	49.4	57.9	31.2	50.6	8.5	19.4	17.1	62.1
	(3.2)	(3.0)	(10.1)	(9.5)				
FEMALES								
Any Post-Secondary								
Parental Education								
No High School	52.6	57.8	42.1	63.3	5.2	21.2	9.8	50.3
	(2.6)	(4.6)	(5.9)	(6.7)				
High School	65.3	69.7	55.9	70.9	4.4	15.0	6.8	26.9
	(2.8)	(2.1)	(7.2)	(4.7)				
College	74.5	83.1	33.9	63.4	8.6	29.5	11.5	86.9
	(3.3)	(1.9)	(10.1)	(7.3)				
University	85.7	91.1	44.8	92.4	5.4	47.6	6.4	106.2
	(2.2)	(1.5)	(10.6)	(3.5)				
University								
Parental Education								
No High School	19.1	19.1	17.1	21.9	0.0	4.8	0.1	28.1
	(2.0)	(3.1)	(4.5)	(7.0)				
High School	27.5	30.5	33.8	26.1	3.0	-7.7	11.0	-22.8
	(2.6)	(2.2)	(6.8)	(4.9)				
College	45.7	47.0	6.5	24.1	1.3	17.6	2.9	268.9
	(3.8)	(3.0)	(5.3)	(5.5)				
University	54.5	66.9	26.0	44.6	12.4	18.7	22.8	72.0
	(3.2)	(2.8)	(9.3)	(11.2)				

Values in brackets are standard errors.

Table B.4 -- Post-Secondary Participation by Family Type - 20 Year-olds Only

	Participation (%)				Change (%)			
	Males		Females		Absolute		Relative	
	SLS	YITS	SLS	YITS	Males	Females	Males	Females
Any Post-Secondary								
Two Parents	56.3	66.7	66.3	77.8	10.4	11.5	18.5	17.4
	(1.4)	(1.3)	(0.0)	(0.0)				
Father Only	37.5	58.5	52.8	69.2	21.0	16.4	55.8	31.1
	(5.6)	(6.7)	(0.1)	(0.1)				
Mother Only	38.5	54.8	47.9	68.9	16.3	21.0	42.4	43.7
	(3.3)	(3.5)	(0.0)	(0.0)				
Other	33.7	55.6	37.8	62.9	21.9	25.1	65.1	66.5
	(3.9)	(6.2)	(0.0)	(0.1)				
University								
Two Parents	27.1	31.9	33.8	43.7	4.7	9.9	17.5	29.2
	(1.2)	(1.5)	(1.4)	(1.4)				
Father Only	7.2	25.2	26.0	21.6	18.0	-4.4	251.2	-16.8
	(3.0)	(6.6)	(6.3)	(5.6)				
Mother Only	16.0	24.5	20.4	26.6	8.5	6.2	52.7	30.4
	(2.5)	(3.6)	(2.8)	(3.0)				
Other	12.5	25.4	12.8	34.6	13.0	21.8	104.3	170.0
	(2.7)	(4.9)	(2.1)	(6.7)				

Values in brackets are standard errors.

Table B.5 -- Post-Secondary Participation by Province - 20 Year-olds Only

	Participation Rates (%)				Change (%)			
	Males		Females		Absolute		Relative	
	SLS	YITS	SLS	YITS	Males	Females	Males	Females
Any Post-Secondary								
Newfoundland	37.1	65.9	48.5	77.9	28.8	29.4	77.7	60.7
	(3.3)	(5.0)	(3.7)	(3.8)				
Prince Edward Island	35.5	53.9	53.6	64.4	18.4	10.8	51.9	20.2
	(3.8)	(8.8)	(3.6)	(6.9)				
Nova Scotia	42.5	58.7	51.4	79.1	16.2	27.7	38.2	54.0
	(3.8)	(5.1)	(3.9)	(3.5)				
New Brunswick	38.5	56.1	47.3	73.3	17.5	26.0	45.5	54.9
	(3.3)	(4.0)	(4.0)	(3.9)				
Quebec	59.9	73.4	69.9	83.6	13.5	13.7	22.5	19.6
	(3.5)	(2.2)	(3.6)	(2.1)				
Ontario	50.6	65.6	65.7	78.2	15.1	12.5	29.8	19.0
	(3.9)	(2.1)	(3.6)	(1.8)				
Manitoba	44.9	55.9	53.0	67.8	10.9	14.8	24.3	27.9
	(3.9)	(4.4)	(4.0)	(3.8)				
Saskatchewan	48.4	60.3	49.8	71.1	11.9	21.3	24.6	42.8
	(4.2)	(4.2)	(3.9)	(3.4)				
Alberta	56.8	55.9	64.0	63.8	-0.9	-0.2	-1.7	-0.3
	(4.0)	(4.1)	(3.7)	(3.8)				
British Columbia	54.0	56.3	50.6	64.6	2.3	14.0	4.2	27.7
	(3.9)	(4.6)	(4.0)	(3.6)				
University								
Newfoundland	20.0	39.9	30.6	50.9	19.9	20.3	99.3	66.2
	(2.7)	(5.3)	(3.4)	(4.7)				
Prince Edward Island	26.8	33.0	35.6	43.4	6.3	7.8	23.3	22.0
	(3.5)	(7.7)	(3.5)	(6.4)				
Nova Scotia	29.8	36.1	33.4	57.1	6.3	23.8	21.2	71.3
	(3.5)	(4.6)	(3.7)	(3.8)				
New Brunswick	22.4	35.2	30.1	46.9	12.8	16.9	56.9	56.0
	(2.9)	(4.0)	(3.7)	(4.5)				
Quebec	13.3	18.7	23.0	26.2	5.4	3.2	40.6	13.9
	(2.4)	(2.6)	(3.3)	(2.7)				
Ontario	27.7	35.1	37.9	45.7	7.4	7.8	26.7	20.7
	(3.5)	(2.4)	(3.6)	(2.3)				
Manitoba	30.8	32.9	38.8	44.2	2.1	5.4	6.8	13.9
	(3.6)	(4.4)	(3.9)	(4.0)				
Saskatchewan	31.2	38.5	37.3	49.1	7.3	11.7	23.3	31.4
	(3.9)	(4.6)	(3.8)	(4.1)				
Alberta	28.4	31.6	32.4	35.3	3.2	2.9	11.3	9.1
	(3.6)	(3.7)	(3.6)	(4.0)				
British Columbia	27.4	31.4	17.1	41.2	3.9	24.0	14.4	140.2
	(3.5)	(4.0)	(3.0)	(3.6)				

Values in brackets are standard errors.

Table B.6a – Post-Secondary Participation Regression Results with Parental Education Dummy Variables - 20 Year-olds Only

	Any Post-Secondary				University			
	Males		Females		Males		Females	
	SLS	YITS	SLS	YITS	SLS	YITS	SLS	YITS
Parental Education								
Don't Know	-0.366***	-0.109	-0.345***	-0.117	-0.188***	-0.064	-0.106	-0.074
	(0.086)	(0.066)	(0.113)	(0.079)	(0.046)	(0.047)	(0.091)	(0.091)
No High School	-0.133*	-0.167***	-0.163**	-0.147***	-0.094*	-0.080**	-0.082	-0.084**
	(0.068)	(0.056)	(0.068)	(0.049)	(0.052)	(0.035)	(0.062)	(0.038)
College	0.070	0.199***	0.074	0.121***	0.082	0.124***	0.185**	0.186***
	(0.076)	(0.034)	(0.070)	(0.027)	(0.070)	(0.034)	(0.076)	(0.037)
University	0.157**	0.303***	0.192***	0.209***	0.259***	0.390***	0.273***	0.380***
	(0.064)	(0.029)	(0.055)	(0.025)	(0.064)	(0.035)	(0.068)	(0.035)
Family Type								
Father Only	0.149	0.093	-0.137	-0.031	-0.267***	0.121	-0.286***	-0.031
	(0.191)	(0.108)	(0.285)	(0.096)	(0.046)	(0.122)	(0.072)	(0.093)
Mother Only	-0.217*	-0.140**	-0.093	-0.007	-0.097	-0.025	0.052	-0.036
	(0.121)	(0.056)	(0.133)	(0.049)	(0.073)	(0.044)	(0.126)	(0.053)
Other	-0.233**	0.013	-0.274***	-0.068	-0.109	0.052	-0.165**	0.049
	(0.092)	(0.063)	(0.097)	(0.062)	(0.069)	(0.051)	(0.073)	(0.065)
Parental Education and Family Type Intera								
Don't Know x Father Only	-0.173	-0.508***	-0.167	-0.593***	0.206***	-0.220	0.138	-0.253*
	(0.255)	(0.140)	(0.310)	(0.165)	(0.050)	(0.136)	(0.121)	(0.138)
No High School x Father Only	-0.426*	-0.09	0.564*	0.249	0.134**	-0.051	0.455***	0.058
	(0.220)	(0.172)	(0.307)	(0.158)	(0.063)	(0.150)	(0.163)	(0.148)
College x Father Only	-0.098	-0.110	0.262	-0.145	0.001	-0.379***	0.639***	-0.317**
	(0.265)	(0.158)	(0.339)	(0.209)	(0.082)	(0.127)	(0.226)	(0.151)
University x Father Only	-0.421	-0.126	0.244	-0.007	0.06	-0.112	0.589***	-0.184
	(0.293)	(0.163)	(0.287)	(0.123)	(0.167)	(0.208)	(0.128)	(0.205)
Don't Know x Mother Only	0.304	-0.131	0.274	-0.240	0.165*	-0.012	-0.204	-0.090
	(0.196)	(0.114)	(0.232)	(0.149)	(0.095)	(0.073)	(0.151)	(0.116)
No High School x Mother Only	0.04	0.104	0.013	0.074	0.069	0.107	-0.074	0.070
	(0.167)	(0.106)	(0.180)	(0.100)	(0.107)	(0.089)	(0.158)	(0.093)
College x Mother Only	0.041	-0.014	-0.249	-0.193**	0.095	0.016	-0.384***	-0.166**
	(0.225)	(0.100)	(0.208)	(0.089)	(0.182)	(0.100)	(0.146)	(0.083)
University x Mother Only	0.299**	0.147**	-0.282	-0.020	-0.073	-0.021	-0.317	-0.138
	(0.152)	(0.074)	(0.221)	(0.060)	(0.144)	(0.106)	(0.209)	(0.115)
Province								
Newfoundland	-0.053	0.051	-0.139**	0.024	0.003	0.107**	-0.044	0.089*
	(0.059)	(0.049)	(0.058)	(0.043)	(0.048)	(0.050)	(0.056)	(0.051)
Prince Edward Island	-0.132**	-0.121	-0.118**	-0.122*	0.011	-0.009	-0.017	-0.006
	(0.059)	(0.075)	(0.056)	(0.068)	(0.052)	(0.062)	(0.056)	(0.062)
Nova Scotia	-0.060	-0.053	-0.153**	-0.003	0.054	0.044	-0.046	0.110***
	(0.060)	(0.051)	(0.060)	(0.037)	(0.053)	(0.047)	(0.060)	(0.041)
New Brunswick	-0.075	-0.074	-0.151**	-0.039	0.007	0.041	-0.050	0.032
	(0.061)	(0.046)	(0.060)	(0.040)	(0.052)	(0.044)	(0.058)	(0.047)
Quebec	0.142**	0.114***	0.067	0.056**	-0.095*	-0.128***	-0.131**	-0.192***
	(0.063)	(0.029)	(0.060)	(0.026)	(0.051)	(0.031)	(0.061)	(0.036)
Manitoba	-0.058	-0.073	-0.105	-0.090**	0.040	0.007	0.033	0.007
	(0.061)	(0.045)	(0.064)	(0.041)	(0.053)	(0.045)	(0.063)	(0.044)
Saskatchewan	-0.017	-0.018	-0.171***	-0.078**	0.050	0.071	-0.012	0.034
	(0.064)	(0.045)	(0.062)	(0.038)	(0.057)	(0.047)	(0.062)	(0.044)
Alberta	0.049	-0.101***	-0.050	-0.160***	0.005	-0.036	-0.085	-0.129***
	(0.062)	(0.039)	(0.062)	(0.040)	(0.058)	(0.037)	(0.065)	(0.045)
British Columbia	0.024	-0.073	-0.162**	-0.144***	-0.022	-0.016	-0.214***	-0.051
	(0.063)	(0.046)	(0.068)	(0.038)	(0.057)	(0.042)	(0.059)	(0.040)
Immigrant	-0.014	0.023	-0.021	0.015	-0.014	0.095*	-0.029	0.012
	(0.099)	(0.043)	(0.082)	(0.041)	(0.078)	(0.049)	(0.078)	(0.045)
Constant	0.545***	0.555***	0.701***	0.735***	0.249***	0.206***	0.344***	0.345***
	(0.061)	(0.029)	(0.060)	(0.025)	(0.056)	(0.023)	(0.062)	(0.029)
Observations	1,748	3,185	1,688	3,259	1,748	3,185	1,688	3,259
R-squared	0.132	0.155	0.146	0.116	0.140	0.168	0.147	0.153

Standard errors in brackets. The asterisks indicate the following levels of significance: * 10% significance, ** 5% significance, *** 1% significance.

Table B.6b – Post-Secondary Participation Regression Results with a Single Linear Parental Education Variable - 20 Year-olds Only

	Any Post-Secondary				University			
	Males		*Females*		*Males*		*Females*	
	SLS	YITS	SLS	YITS	SLS	YITS	SLS	YITS
Parental Education								
Years of education	0.044***	0.071***	0.051***	0.055***	0.051***	0.079***	0.054***	0.077***
	(0.010)	(0.007)	(0.008)	(0.006)	(0.008)	(0.006)	(0.009)	(0.006)
Don't Know	0.169	0.728***	0.283*	0.535***	0.401***	0.849***	0.489***	0.804***
	(0.144)	(0.120)	(0.153)	(0.114)	(0.100)	(0.095)	(0.131)	(0.122)
Family Type								
Father Only	-0.176	0.124	0.358	0.604**	0.003	0.513*	-0.717	0.726**
	(0.399)	(0.307)	(0.506)	(0.292)	(0.238)	(0.301)	(0.495)	(0.343)
Mother Only	-0.406	-0.172	0.382	0.306	0.136	0.259	0.361	0.519**
	(0.330)	(0.221)	(0.366)	(0.198)	(0.209)	(0.222)	(0.276)	(0.235)
Other	0.303**	0.851***	0.355**	0.585***	0.483***	0.967***	0.434***	0.933***
	(0.148)	(0.110)	(0.142)	(0.099)	(0.114)	(0.094)	(0.121)	(0.099)
Parent Education and Family Type Interactions								
Years of education x Father Only	0.002	-0.009	-0.024	-0.048**	-0.015	-0.037	0.055	-0.066**
	(0.034)	(0.023)	(0.033)	(0.022)	(0.022)	(0.026)	(0.040)	(0.028)
Don't Know x Father Only	0.157	-0.539*	-0.663	-1.229***	-0.06	-0.608**	0.568	-1.011***
	(0.433)	(0.325)	(0.524)	(0.363)	(0.235)	(0.307)	(0.507)	(0.389)
Years of education x Mother Only	0.023	0.006	-0.045	-0.028*	-0.017	-0.021	-0.037	-0.048***
	(0.026)	(0.016)	(0.030)	(0.015)	(0.018)	(0.018)	(0.023)	(0.018)
Don't Know x Mother Only	0.493	-0.099	-0.200	-0.552**	-0.068	-0.293	-0.513*	-0.644**
	(0.363)	(0.245)	(0.412)	(0.245)	(0.218)	(0.230)	(0.287)	(0.258)
Province								
Newfoundland	-0.057	0.044	-0.147**	0.025	0.003	0.103**	-0.041	0.096*
	(0.059)	(0.049)	(0.057)	(0.043)	(0.048)	(0.050)	(0.056)	(0.050)
Prince Edward Island	-0.134**	-0.125	-0.121**	-0.122*	0.011	-0.010	-0.019	-0.01
	(0.059)	(0.077)	(0.055)	(0.067)	(0.051)	(0.066)	(0.056)	(0.062)
Nova Scotia	-0.059	-0.051	-0.153**	-0.003	0.050	0.036	-0.042	0.106***
	(0.061)	(0.052)	(0.060)	(0.037)	(0.053)	(0.047)	(0.060)	(0.041)
New Brunswick	-0.069	-0.074	-0.153**	-0.034	0.005	0.038	-0.054	0.036
	(0.061)	(0.045)	(0.060)	(0.041)	(0.051)	(0.044)	(0.058)	(0.047)
Quebec	0.147**	0.119***	0.066	0.064**	-0.088*	-0.130***	-0.121**	-0.173***
	(0.063)	(0.029)	(0.059)	(0.026)	(0.051)	(0.032)	(0.060)	(0.035)
Manitoba	-0.049	-0.079*	-0.109*	-0.090**	0.040	0.003	0.029	0.012
	(0.061)	(0.045)	(0.065)	(0.041)	(0.053)	(0.045)	(0.063)	(0.045)
Saskatchewan	-0.009	-0.021	-0.173***	-0.074**	0.048	0.071	-0.016	0.029
	(0.064)	(0.044)	(0.062)	(0.038)	(0.057)	(0.047)	(0.062)	(0.044)
Alberta	0.045	-0.100**	-0.054	-0.162***	-0.004	-0.040	-0.092	-0.127***
	(0.062)	(0.039)	(0.062)	(0.040)	(0.057)	(0.038)	(0.065)	(0.045)
British Columbia	0.012	-0.075	-0.166**	-0.147***	-0.021	-0.020	-0.226***	-0.054
	(0.063)	(0.047)	(0.068)	(0.039)	(0.056)	(0.043)	(0.059)	(0.040)
Immigrant	-0.009	0.031	-0.017	0.020	-0.016	0.112**	-0.020	0.028
	(0.098)	(0.044)	(0.082)	(0.040)	(0.078)	(0.049)	(0.077)	(0.046)
Constant	0.008	-0.284***	0.074	0.079	-0.342***	-0.710***	-0.253**	-0.543***
	(0.134)	(0.098)	(0.120)	(0.083)	(0.103)	(0.083)	(0.113)	(0.084)
Observations	1,748	3,185	1,688	3,259	1,748	3,185	1,688	3,259
R-squared	0.128	0.144	0.145	0.114	0.136	0.150	0.139	0.143

Standard errors in brackets. The asterisks indicate the following levels of significance: * 10% significance, ** 5% significance, *** 1% significance.

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